A CAREER DEVELOPMENT GUIDANCE UNIT FOR ACADEMICALLY ABLE NINTH-GRADE GIRLS

By

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Abstract of Dissertation Presented to the Graduate School of the University of Florida in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

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The purpose of this study was to investigate the effects of a developmental guidance unit and self-instruction module on ninth-grade academically able girls. More specifically, the study examined how the unit affected social self-esteem, career self-efficacy, locus of control, career locus of control, and knowledge of the world of work. In addition, three group conditions related to the method of delivery of the unit were compared: adult helper-led, high school peer helper-led, and self-instruction.

A pretest-posttest control group design was used with 84 ninth-grade academically able girls from two high schools in a north Florida county school district. Eighty-four girls were assigned to one of the three experimental groups or the control group. The intervention was delivered in one condition by adults (guidance counselors) and trained and supervised high-school peer helpers in another condition.

The third condition consisted of students responding to a self-instruction module about career development and did not include group activities and discussion. Data were analyzed using a repeated measures analysis of variance on five dependent variables. Five null hypotheses were tested.

No significant differences (α=.05) were found among groups in changes from pretest to posttest in self-esteem (Ho_1), career locus of control (Ho_2), locus of control (Ho_3), knowledge of the world of work (Ho_4), or several subhypotheses of career self-efficacy (math and nonmath careers, traditional and nontraditional careers) and interest (Ho_5). However, a significant mean difference resulted from pretest to posttest (α=.05) for the peer-led group for self-efficacy for educational requirements and job tasks.

The data provided only limited support for the 8-week career development unit with the ninth-grade girls. Peer-led groups appear to have been effective in enhancing self-efficacy for education requirements and job tasks. Further, qualitative data taken from students who experienced the unit indicated that it was favorably perceived and valued.

Adolescent girls are at a crucial time in their development, vulnerable to feminizing social influences which conflict with their drive toward personal growth. The unit had limited but statistically significant success in assisting young women to increase their confidence in making career choices and preparing for careers.

CHAPTER 1
INTRODUCTION

More women than ever before are entering the work force. By the year 2000, 66% of the new entrants and 47% of the entire work force will be women (AAUW, 1992). In addition, women are working longer hours and spending less time away from their careers to stay home with children and families (Shakeshaft & Palmieri, 1978; U.S. Bureau of the Census, 1993). At the same time, women face some discriminatory practices, many related to sex role stereotypes which limit their training, contributions, and remuneration (U.S. Department of Labor, 1991, 1992).

According to Herr and Kramer (1992), sex role stereotypes and other childhood conditioning have discouraged many women from higher aspirations in terms of career choice and advancement within a chosen career. Women experience lower levels of self-esteem (Astin, 1985; Brooks, 1988), self-efficacy (Hollinger, 1991b), and feelings of control in choosing a career and often have a fear of failure and success (Horner, 1972). Because adolescence is a time in which career preparation is particularly emphasized, the messages that young women receive about themselves and about

career opportunities are particularly important. Personal decisions are made about courses which, in turn, determine opportunities for postsecondary training (Pipher, 1994; Sadker & Sadker, 1994).

Adolescence is a particularly critical stage of career development for young women, whether white, Latina (Debold, 1995), lesbian (Schultz, 1991), or African American (Debold, 1995; Hooks, 1993). Ginzberg (Ginzberg, Ginsberg, Axelrad, & Herma, 1951) asserted that occupational choice is a developmental process, a series of decisions made over a period of years. He emphasized the interplay of personality, environment, and education in the decision-making process. It is an especially critical time for academically able girls to examine opportunities in nontraditional careers and roles (AAUW, 1992; Astin, 1985; Gottfredson, 1981; Hollinger, 1991a, 1991b; Kramer, 1986; Sadker & Sadker, 1994).

Ginzberg (1987) described the process in adolescence as a "tilting," a time in which the adolescent female is incorporating a growing concern with the opportunities and limitations set by reality, in addition to the subjective arena of interests, capacities, and values. The young woman in high school is especially vulnerable to environmental influences that might affect her self-esteem and her self-perceived capacity for success.

Studies have corroborated concerns about adolescent female vulnerability. An American Association of University

Women study (AAUW, 1992) of 3,000 4th- through 10th-grade students examined the impact of gender on self-esteem levels, career aspirations, educational experiences, and math-science interests. The study revealed that, as girls grow up, they lose confidence in their abilities, expect less from life, and lose interest in challenging courses of study, particularly pursuits involving math and science (AAUW, 1992; Levine, 1992). This was true, the report emphasizes, even though the fastest growing fields are those requiring math and science backgrounds: A 36% growth is expected by the year 2000.

The schools have played a critical role, according to the AAUW report, in limiting girls' aspirations through various forms of gender bias. Gender bias includes a lower quality and quantity of classroom attention and negligence in addressing issues in young women's lives previously regarded as "private," such as sex roles and stereotypes. A climate of low expectations, gender inequity, and sexual harassment limits aspirations and closes options for career preparation (Debold, 1995; Miller, 1991; Orenstein, 1994).

Career self-efficacy is an important variable in choice of and success in careers. Results of research with adolescents have consistently shown that young women select from only a few occupational possibilities (Hackett & Betz, 1981), often on a sex-typed basis, and that women have lower occupational expectations (Adelman, 1991). Many females see

the sexes in stereotypical ways, in that women and men should enact different domestic and occupational roles (Aneshensel & Rosen, 1980), beginning at a very young age (MacKay & Miller, 1982).

Hackett and Betz (1981) proposed that through socialization experiences individuals developed self-efficacy beliefs, defined as their perceived ability for success (Bandura, 1977, 1989), about their ability to perform various occupations. Subsequent studies indicated a gender link to choice of traditional or nontraditional occupations, especially those requiring math and science for college students (Betz & Hackett, 1991; Brooks, 1988; Hannah & Kahn, 1989) and for eighth- and ninth-graders (Post-Kammer & Smith, 1985).

Self-esteem is another important variable in the choice of career and success in careers. Self-esteem is defined by Korman (1967) as a person's characteristic evaluation of himself or herself as an individual. Low self-esteem is characterized by a sense of personal inadequacy and an inability to achieve need satisfaction in the past; high self-esteem is defined by a sense of personal adequacy and a sense of having need satisfaction in the past.

Bem (1981, 1995) wrote that sex role socialization was the most pervasive and limiting factor for young women. She wrote that the individual's self-concept system was influenced by sex role socialization such that only

self-beliefs congruent with the person's gender schema were incorporated into the self-concept.

Researchers have shown that agentic attributes, as well as aspirations toward math and science (i.e., nontraditional), may be screened out of the self-concept if seen as stereotypically masculine (Hollinger, 1991a, 1991b; Hollinger & Fleming, 1985, 1988).

Further, a study (AAUW, 1992) showed a marked decrease in self-esteem for girls in grades 4 through 10 compared with boys. An analysis of self-reported reasons showed a decline in interest in math and science for girls and revealed that boys and girls differed in their rationalization of reasons for lower achievement. Boys whose achievement declined rationalized that math and science were not important; girls thought themselves "not smart enough" (AAUW, 1992; Sadker & Sadker, 1994).

Korman (1967) proposed that self-esteem acts as a moderator between social and personal interests for both sexes. The AAUW report (1992) on a study of 3,000 male and female students, grades 4 through 10, across the United States showed that by high school, girls' self-esteem dropped 31% to only 29% with high self-esteem. The drop in self-esteem coincided with a decline in self-confidence and lowered aspirations and affected choices of courses of study and careers.

Locus of control is another important variable in choice of and success in career. Rotter (1972, 1975) defined locus of control as an attribute of personality in which persons are distributed according to their belief in their own control over events in their lives. "Internals" believe that events occur primarily as a result of their own behavior, while "externals" see events following their behavior as determined primarily by outside forces.

Studies by Burlin (1976) and Yount (1986) found no sex link to internality or externality of locus of control. Burlin investigated the relationship of locus of control to real and ideal (innovative, moderate, and traditional) career aspirations of adolescent females. More internals than externals aspired to an innovative occupation in both real and ideal selections. More externals than internals moved from a moderate (status) occupation in their ideal aspiration to a traditional occupation in their real aspiration. The researcher asserted that those who were more able to free themselves from environmental constraints were able to do so because they believed in their ability to accomplish a rewarding goal.

Studies of career locus of control are nonexistent. Career locus of control is conceptualized by the author as related to career choice (traditional vs. nontraditional) and to self-esteem and sex role stereotyping. If a young woman believes that her role in life, career preparation, and

success in the world of work are not based on her own abilities and choices (for example, on her parents' or her boyfriend's wishes), then she is said to have a more external career locus of control. If she thinks that her career choice and success in preparation for and achievement within a career are based on her own actions, then she is said to have a more internal career locus of control. An external orientation is thought to be associated with feelings of inadequacy, restricted scope of choices in making career decisions, and lack of impetus to make decisions.

A young woman's knowledge of the world of work is important to her success. Facts about careers and career preparation, knowledge of the process of mentoring, choosing role models, summoning support, being assertive, and negotiating informal and formal power structures are a few of the areas of knowledge that are pertinent to career success.

Need for the Study

The social environment of adolescent women includes influences that limit their success. Research studies have indicated some areas affected: self-esteem, restrictive gender roles, gender inequity, career self-efficacy, and locus of control. These areas have contributed, in turn, to early, unplanned pregnancies, narrowing of career choices, lower academic achievement, particularly in math and the sciences, and dropping out of school (AAUW, 1992). However, research studies addressing the problems of adolescent women

have been limited in number and in scope. The majority of research studies (AAUW, 1992; Astin, 1985; Bem, 1981; Betz & Hackett, 1991; Brutsaert, 1990; Garrison, Stronge, & Smith, 1986; Gilligan, 1988; Hannah & Kahn, 1989; Jolly, Grimm, & Wozniac, 1990) have been descriptive and have focused on female versus male gender differences in educational and career aspirations and achievement.

Many descriptive research studies have investigated the educational and career achievement and aspirations of females alone (Brooks, 1988; Burlin, 1976; Callahan, 1980; Hollinger, 1991a, 1991b; Hollinger & Fleming, 1985, Horner, 1972; Kline & Short, 1991; U.S. Department of Labor, 1991, 1992); very few have investigated interventions to enhance career aspirations and education for adolescent females (Omizo & Omizo, 1988; Simmons & Parsons, 1983). However, several researchers have indicated a need for intervention with girls. It appears that learned, environmental factors are important in determining gender differences. Thus, interventions offering options for changing learned cognitive and behavioral patterns are justified.

The recent nationwide study by the AAUW (1992) on gender inequity in the schools indicated that socioeconomic status and racial and ethnic differences alone did not explain gender differences in achievement, emotional well-being, and self-esteem. Other studies corroborated the AAUW findings. Examination of these studies helps to identify obstacles and

suggest future interventions to aid academic achievement, increase emotional well-being, and aid in making career choices. Research studies indicated particular areas in which boys and girls differ. A review of the studies reveals that areas such as social self-esteem and self-regard, sense of mastery (locus of control), and other cognitive factors influence girls' expectations and achievement.

Achievement has differed for boys and girls. Studies indicate 40% more girls failed a grade than did boys (Reinkviz, Frost, & Pakiz, 1990). Investigating a theme suggested by Gilligan (1982), it was found that the priorities of girls differed from those of boys. Gender differences occurred in values, self-esteem, social adjustment, and stress from relationship concerns. A study of 852 seventh-grade girls from high schools within the middle states indicated that it was more important to them to learn personal and interpersonal skills and to prepare for careers than to acquire academic competencies. The young women in the study placed greatest value on personal happiness.

Results of studies suggested that girls needed academic achievement, co-curricular accomplishment, and career exploration, according to the researchers (Welsh, 1983). Kline and Short (1991) also concluded that there is a need for interventions in order to increase self-regard and self-confidence.

The development of a sense of mastery has been thought to be important to achievement. Researchers have indicated that girls develop a sense of mastery differently than boys. Herman Brutsaert (1990) found that self-esteem of early adolescent girls depended on parental support, while for early adolescent boys it depended on a sense of mastery. In late adolescence, however, the sense of mastery became important to both genders. Patterns of external locus of control such as those that inhibit instrumental behavior, for example, have been shown more likely for some young women (Cutler & Nolen-Hoeksema, 1991).

In other research, girls tended to be more concerned with social adjustment problems in adolescence than did boys, and lower ratings in self-esteem were correlated with the incidence of those problems. In a study of 201 adolescents, adolescent girls reported significantly more problems (e.g., interpersonal relationships, personal adjustment, health and family issues) and lower self-esteem than did boys. Similarly, there was a significant relationship found between self-esteem and reported problems by Harper and Marshal (1991). In a study by Kwan (1992), it was found that gifted girls were especially susceptible to crises of self-esteem brought on by social adjustment problems. The author suggested that there is a need for preventive guidance to assist development of coping skills.

One method of providing for preventive guidance interventions is with small-group counseling. In the present study, an intervention was planned to aid academically able girls to become more aware of socialization and sex role issues, gain knowledge of the world of work, and build self-esteem, self-efficacy, and a sense of control.

Theoretical Rationale

Career development theory (Ginzberg, 1987; Super, 1987) includes variables that influence the career decision-making process and included environmental and internal factors. Developmental guidance theory, in turn, has indicated methods and strategies for enhancing the career decision-making process. Use of peer facilitators is also a method for enhancing developmental guidance.

An examination of two career development theories will assist in understanding the factors that influence career choice. It is important to understand the impact of environmental influences in order to identify possible interventions, particularly with academically able girls. The theories of Eli Ginzberg and Donald E. Super are especially pertinent in describing the interaction between environment and self.

Ginzberg (1987) stressed that occupational choice is a developmental process, a series of decisions made over a period of years. It is also an irreversible process and is a compromise based on internal and external factors.

High school academically able women aged 11 to 18 are, according to Ginzberg's stages, in the tentative period. Within the tentative period, the young person is steadily broadening her consideration of the elements underlying her emerging choice. At first, her interests serve as a basis for choice. However, as time passes, the young person realizes that her interests are changing and new ones emerging. Equally, she begins to consider whether her capacities are congruent with her interests. The young woman in high school, then, according to Ginzberg, is most vulnerable to environmental influences that might affect not only her self-esteem but also her self-perceived capacity for success.

At age 15 or 16, according to Ginzberg (1987), young persons become aware that they must prioritize their values in making choices leading to a career. For the young woman, there is often a conflict between relationship, family, marriage expectations, and the commitment involved in preparing for a career or profession. The process includes young women "sloughing off" certain tentative choices, to be driven toward others as they seek a better fit (Gans & Blyth, 1990; Harper & Marshall, 1991).

For the college bound, according to Ginzberg (1987), the last stage of the tentative period, *transition,* and the first stage of the realistic period, *exploration*, offer a renewed opportunity to reopen the occupational choice process. The

wedge that opens the transition period is a growing maturity and the awareness of opportunities that will become available during college and beyond. A tilting occurs during these tentative and exploratory stages, from the highly subjective realm of interests, capacities, and values to a growing concern with the opportunities and limitations set by objective reality.

Researchers have suggested that girls need activities that build self-esteem, belief in abilities (self-efficacy), and feelings of control over their lives and career decisions. Co-curricular accomplishment and career exploration (Welsh, 1983), same sex role models (Garrison et al., 1986; Kline & Short, 1991) and realistic appraisals of capacities, values, and interests have been suggested as possible interventions to enhance young women's career development. Another study found that while family support is important in early adolescence, self-mastery becomes more important at the stage of later adolescence (Brutsaert, 1990).

Super's theory described the interplay of socialization influences and individual choices in collecting perceptions. Donald E. Super (1987) posited that

> the process of career development is essentially that of developing and implementing self-concepts; it is a synthesizing and compromising process in which the self-concept is a product of the interaction of inherited aptitudes, physical make-up, opportunity to play various roles, and evaluations of the extent to which the results of role-playing meet with the approval of superiors and fellows. (p. 195)

Super wrote that role-playing may occur in fantasy, in the counseling interview, or in real-life activities. Development through the life stages, especially growth and exploration for high school-aged persons, can be guided by facilitating the maturing of abilities and interests and by aiding in the development of self-concepts.

A study of Super's and Ginzberg's theories of career development stages and tasks indicated that an intervention is needed to enhance vocational self-concept; explore issues, values, and roles open to young women; and to explore realistically the opportunities and obstacles presented in the world of careers and in preparing for those careers.

Developmental Guidance and Counseling

Myrick (1993) has outlined a theory of developmental guidance and counseling. His theory included the concepts that human development is a life-long process, that development involves an interaction between genetic and environmental aspects of the individual, and that normally orderly transitions in the growth process can be disrupted if thwarting factors are introduced. Developmental guidance considers life stages and life tasks.

The goals of developmental guidance focus on enhancement of students' learning, creation of readiness for learning, and facilitating a learning environment. The goals include understanding the school environment, understanding self and others, understanding attitudes and behaviors, decision-

making and problem-solving, interpersonal and communication skills, school success skills, career awareness and educational planning, and community pride and involvement. Counselor interventions with students include individual, small-group, large-group classroom guidance, and peer facilitator programs (Myrick, 1994).

Developmental guidance incorporates the theories of self-concept and career development as integral parts of the school curriculum. Developmental guidance does not supplant the school curriculum. Rather, developmental guidance considers cognitive, behavioral, social, and emotional needs and development of the individual and, thereby, supplements and facilitates the learning process.

Peer Facilitators

Peer counseling programs were originally developed to assist school guidance personnel (Shertzer & Stone, 1981). In 1984, the term "peer facilitator" was adopted officially by the American School Counselors Association (ASCA). A consensus developed that the term "facilitator" delimited a role and function of the student as a "helper," one easily understood by parents and educators.

A peer facilitator was defined as a student who uses helping skills and concepts to assist other students, and sometimes adults, in thinking about ideas and feelings, in making responsible decisions, and in exploring alternatives to situations (Myrick & Bowman, 1981). Peer facilitators may

function in four different roles: special assistant, tutor, special friend, and small group leader (Myrick, 1993).

Benefits of the use of peer facilitators include freeing professionals for other duties, services enhanced by the unique abilities and skills of peer facilitators, the opportunities for the facilitators to gain special insight into the needs and problems of those being served, for specialized training and the opportunity to help others, and for personal growth (Frenza, 1985).

Purpose of the Study

The purpose of this study was to examine the effects of a developmental guidance unit for adolescent females that was directed toward gender inequities and enhanced career planning. More specifically, the goal of this study was to investigate the effects of a small-group intervention with academically able ninth-grade high school females in terms of enhancing self-esteem, self-efficacy, feelings of control, knowledge of the world of work, and feelings of control over career planning and success. Using experimental and control groups for comparison purposes, the developmental guidance unit included identifying obstacles to success, identifying strategies for overcoming those obstacles, and then building skills for career success.

Definition of Terms

The following terms are useful in understanding this study:

Academically able is a term used to identify students who score in the top quartile on a standardized achievement test and who also have at least a 2.0 grade point average.

Career decision-making is a process of deciding about a career, making up one's mind about a choice which affects one's career.

Career locus of control is defined as feelings about one's own control over events in one's life related to career choice and career decision-making.

Career self-efficacy is expectancy for success at completing the required training and performing the job tasks for a specific occupation.

Developmental guidance unit is a unique educational experience in which students can work together to explore their ideas, attitudes, feelings, and behaviors, especially as related to personal development and progress in school. Helping relationships are formed, self-disclosure and feedback occur, and the experience is generally more intense and personalized than larger group or classroom guidance. There are three small group counseling approaches: crisis-centered, problem-centered, and growth-centered (Myrick, 1993).

Knowledge of the world of work is a construct defined as information about availability and accessibility of careers, skills and knowledge needed to access and succeed in careers, discriminatory practices, and gender issues.

Locus of control concerns feelings about having control of events in one's life or taking responsibility for one's life.

Self-efficacy is an expectancy for success at a task on which success is perceived to be dependent on ability (Bandura, 1989; Kirsch, 1986).

Self-esteem is a person's evaluation of oneself as an individual.

Research Questions

In conducting small-group counseling interventions with academically able high school females, the following research questions were addressed:

1. Will academically able high school girls who receive a developmental guidance unit develop increased self-esteem?

2. Will academically able high school girls who receive a developmental guidance unit increase their feelings about control over their career choices?

3. Will academically able high school girls who receive a developmental guidance unit increase their feelings about control over their lives?

4. Will academically able girls who receive a developmental guidance unit increase their knowledge of the world of work?

5. Will academically able high school girls who receive a developmental guidance unit increase their feelings of self-efficacy about occupations?

6. Will academically able high school girls who receive a peer-led developmental guidance unit increase their self-esteem, career self-efficacy, locus of control, career locus of control, knowledge of the world of work, or a combination of the dependent variables in a consistent, significant relationship to the level of treatment?

Organization of the Remainder of the Study

The remainder of the study is presented in four chapters. In Chapter 2, the related literature was reviewed and analyzed. A discussion of the methodology follows in Chapter 3. The results of the study are presented in Chapter 4, and a discussion of the results is included in Chapter 5.

CHAPTER 2
REVIEW OF LITERATURE

This chapter is a review of the professional literature focusing on the changes in the world of work for women and the need for career development for women. The initial section includes information about barriers and limitations that exist in the workplace and forces confronting inequities. The next section has a description of the losses to society as well as in women's self-esteem, sense of control, and self-efficacy associated with social attitudes toward women and their resultant effect on young women's career development. The final section includes a description of related career development theories and their implications for interventions to enhance self-esteem, career self-efficacy, and locus of control.

Women in the World of Work

Women are entering once-sacred male hallways and board rooms in increasing numbers, and they are achieving success. For example, a popular news magazine recently touted figures that showed large increases in the number of women in Congress (Bogert, Waller, & Whitmore, 1994).

Equally evident is the fact that more women than ever are entering the work force. They are working longer and

spending less time away from their careers to stay home with children and families.

Statistics support the existence of the trend of younger generations of women to increasingly enter and remain in the labor force: 74% of women aged 25-34 years are in the labor force; 77% of those aged 35-44; and 73% of those aged 45-54, as compared to only 47% of those aged 55-64. Further indication of the increase in women in the labor force is that 38% of the civilian labor force in 1970 was female compared with 46% today. A married woman today can expect to work for 25 years, while a single woman can expect to work for 45 years (Shakeshaft & Palmieri, 1978).

The number of women in the workplace is increasing; however, inequities exist in the ways women are paid and promoted. In addition, inequities exist in access to desirable placement, training, and education.

Although statistics show women are entering the work force and achieving success as never before, the success is limited. Inequities in the world of work are mirrored in the inequities of education and training of women. More women are earning college degrees than ever before. However, the percent of higher level degrees earned by women is less than those earned by men.

In 1965, the first year for which such data are complete, the percent of females of the total (men and women) earning a degree, including associate, bachelor's, master's,

first professional, and doctor's degrees, was 38.4% (bachelor's, 42.6%; master's, 33.8%; first professional, 3.6%; doctor's, 11.8%). In 1985, the percentage of women had increased to 50.4% of total (50.7% of bachelor's, 50% of master's, 50% of first professional, and 50% of doctor's). The projection for 1995 is 54.6% of total degrees (54.1% of bachelor's, 53.1% of master's, 43% of first professional, and 41.5% of doctor's) (U.S. Bureau of the Census, 1993).

Before 1985, women earned fewer degrees than men, and their aspirations were lower. For example, women's goals were lower than men's in terms of earning a college education. Of all those who did aspire to more education, fewer women than men planned to go on for post-secondary degrees, as shown in a U.S. Department of Education study by Adelman (1991). In a publication of the results of the National Longitudinal Study of the High School Class of 1972, the aspirations and plans to earn a bachelor's degree or higher were compared for males and females. The percentage of women with reduced aspirations, that is, those who aspired to a degree but did not plan to earn one, was 16.3% compared to 11.2% for men (Adelman, 1991).

Not only were aspirations and achievement lower, but also workplace conditions differed for men and women. Once women entered the world of work, the status they achieved and the earnings they made differed considerably from those of men. The area of higher education was no exception.

Although figures were not given for males versus females for each rank of faculty, figures for total higher education faculty employment in 1992 were given: 45.2% of women in all institutions of higher learning were tenured; 67.7% of men (U.S. Bureau of the Census, 1993).

Differences exist between men's and women's successful entry into the more highly paid, professional occupations such as architecture, law and judiciary, and the supervisory level of sales occupations. The more highly paid, higher-status professions have shown an increase in percent of women over time, but the total number of women employed in that specific occupation compared to men remained less (see Table 2.1).

In a U.S. Census Bureau report (1993) of full-time wage and salary workers' median weekly earnings for selected categories of occupations, females earned consistently less than males. Single women with families earned less than married women with families. Women's income in terms of percent of what men earned appeared to be rising, but females consistently earned less. In 1983, females 16-24 years old earned 88% of what men earned and 92% in 1992. Females aged 25 years and older in 1983 earned 65.8% of what men earned and in 1992 earned 74.2% of what men earned.

By specific categories of the higher professional levels, income was about 30% lower than men's earnings. In the managerial and professional occupations, for example,

Table 2.1

Employed Civilians by Occupation and Sex

	Percent of Women by Profession	
Profession	% 1983	% 1992
Architects	12.7	15.3
Engineers	5.8	8.5
Mathematical and Computer Scientists	29.6	33.5
Natural Scientists	20.5	27.2
Physicians	15.8	20.4
Pharmacists	26.7	37.8
Teachers, College and University	36.3	40.9
Economists	37.9	43.3
Lawyers and Judges	15.8	21.4
Engineering and Related Technologists and Technicians	18.4	17.5
Sales Occupations	47.5	47.9
but Supervisors and Proprietors only	28.4	34.8

(U.S. Census Bureau, 1993)

females earned 69% in 1983 and 72% of what males earned in 1992. In the "technical, sales, and administrative support" category, women's earnings were 64% of men's in 1983, and in

1992, women's earnings were 70% of men's (AAUW, 1992; U.S. Bureau of the Census, 1993).

In summary, women's training and education for work has been lower than men's. Women's aspirations and level of degrees earned have been lower. Once women entered the world of work, actual income levels and professional levels compared to men's, though improved, have remained considerably lower (AAUW, 1992; U.S. Bureau of the Census, 1993).

Barriers and Limitations for Women in the Workplace

Although women are entering the workplace in increasing numbers, environmental influences and socialization have worked to impose barriers to success. The limitations have manifested as lowered income and advancement in the world of work and in the perceived or real reduction of choices of types of careers and career preparation. In other words, barriers exist for women not only in accessing certain occupations, but within the occupations as well.

Socially prescribed roles have limited women. Women are still the primary care givers for both children and elders (Coffee, 1994) coexisting with a dearth of quality daycare. In addition, women's access, pay, and promotion differ from men's. The majority of females are still employed in low-paying "dead-end" jobs and in the "traditional" occupations (e.g., clerical workers, service workers, retail sales workers) (U.S. Bureau of the Census, 1993). Female-headed

households have the lowest median family income, $16,692, according to U.S. Bureau of the Census (1993) figures.

Women entering the world of work do not always aspire to success commensurate with ability. A review of the literature revealed that career "undershooting" (Herr & Kramer, 1992), or a low level of occupational aspiration, has been attributed to occupational stereotyping as a result of childhood conditioning and sex stereotyping of jobs (Aneshensel & Rosen, 1980; Collins, Reardon, & Wates, 1980; Lunneborg, 1982; Kluth & Muchinsky, 1984; MacKay & Miller, 1982; Robison-Awana, Kehle, & Jenson, 1986; Teglasi, 1981; Yount, 1986); low self-esteem and self-efficacy in terms of math, science, and nontraditional careers; lack of career development to serve special needs of women; and internal and external conflicts for females, fear of failure and fear of success (Horner, 1972), and other childrearing and socialization practices.

The impetus for increased entry of women into the workplace and sex desegregation in occupations began with the consciousness raised by the "Women's Liberation Movement." The movement was supported by government mandates against sexual discrimination. However, many areas of discrimination still exist. For example, sex desegregation has increased in managerial and professional occupations in the "higher status" fields; however, the desegregation rates are highest

in occupations in which men are paid less and the number of workers is declining (Jolly, Grimm, & Wozniak, 1990).

An example of recent discrimination was reported in the Glass Ceiling Initiative, a study by the U.S. Department of Labor (1991, 1992) confirming that women were consistently discriminated against in terms of advancement to higher levels of employment. The impact of the report has not been as far-reaching as one might have hoped: One year after the original report, a study of 400 female executives reported that corporations had done somewhat better over the past 5 years in hiring and promoting female executives, but more than half said that progress had slowed.

In summary, women are increasingly choosing from nontraditional career options, but in smaller numbers than expected; they are encountering obstacles to their success; they are not entering the higher, better paid and more prestigious levels; and they are still paid less than men.

Confronting Inequities

Government attempts to remove barriers to inequities for women have been well documented. The Equal Pay Act of 1963 amended the Fair Labor Standards Act. It prohibited wage discrimination in favor of equal pay for equal work with the same employer and in the same establishment. However, the exemptions in the Fair Labor Standards Act for executive, administrative, and professional employees automatically applied in the amended act, so workers at these levels were

not covered by its antidiscriminatory provisions. Nevertheless, the U.S. Equal Opportunity Commission has held that women not protected against discrimination in pay by the Fair Labor Standards Act are protected by Section 703(h) of Title VII of the Civil Rights Act of 1964 (Wallace, 1973).

Title VII of the Civil Rights Act of 1964 made discrimination in the workplace on the basis of sex illegal. The Sexual Discrimination Guidelines against sexual harassment were administered by the Equal Employment Opportunity Commission (EEOC) as an amendment to the original Civil Rights Act of 1964 (Coffee, 1994).

The passage of Title VII of the Civil Rights Act of 1964 prohibited employers from discriminating in hiring or firing; in wages, terms, conditions, or privileges of employment; in classifying, assigning, or promoting employees; in extending or assigning use of facilities; and in training, retraining, and apprenticeship. The act guaranteed equal employment for all persons regardless of their race, color, religion, sex, or national origin and is administered by the U.S. Equal Employment Opportunity Commission (EEOC). In 1972, coverage of Title VII was extended to include employees of state and local governments, educational institutions, and also of private employers of more than 15 persons (Wallace, 1973).

The EEOC was originally limited to interpretation of Title VII and investigation and conciliation of complaints alleging discrimination. The burden of seeking enforcement

through the federal courts rested mainly on the aggrieved individual. The Commission referred to the U.S. Attorney General selected cases involving a pattern or practice of discrimination and filed as a friend of the court in private actions. Under the 1972 amendment to Title VII, the Commission may now bring civil suits against nongovernmental respondents.

In 1969, women charging sexual discrimination filed 3,572 complaints, or about 20% of the total cases of discrimination. A large number of complaints were filed on the behalf of women faculty members who charged more than 350 academic institutions with sex discrimination in hiring, promotion, and tenure (Wallace, 1973).

Child care has often been a major concern for working women, whether married or single. Child care expenses for families has been considered in government action. In 1972, legislation began to allow deductions for child care expenses for two-parent families in which both parents worked (Wallace, 1973). In 1993, the Family and Medical Leave Act was signed into law, allowing about half the work force to receive up to 12 weeks of unpaid leave to care for families and guaranteeing that they will have a job upon returning (Coffee, 1994).

Wallace wrote in 1973 that the gap in earnings between women and men reflected the two facts: (a) that most women workers had been allocated into low paying occupations and

(b) that some wage discrimination had existed within the same occupations. Income differentials between male and female executives, added Wallace, may have been even higher because of the fringe benefits, stock options, executive insurance, and investment in training. Many companies, he noted, had paid membership fees in exclusive clubs where business problems had been discussed and where women at one time had not been permitted entry (Wallace, 1973).

In order to investigate discrimination such as Wallace outlined, the Glass Ceiling Initiative was launched in 1989 by the Department of Labor. The study defined the glass ceiling as the existence of artificial barriers based on attitudinal or organizational bias that prevented qualified individuals from advancing upwards into management level positions.

The study reported that a survey of Fortune 1000-sized companies over a period of 3 years showed that, of 147,179 employees, 37.2% were women. Of the 147,179 employees, 31,184 were in all levels of management. Of the 31,184 in management, only 16.9% were women. Of 4,491 managers at the executive level (vice president or higher), 6.6% were women. In the previous 10 years, there had been only a slight increase in women in the top executive positions. Recent popular news magazines report minimal progress to date (Bogert et al., 1994; Del Valle, 1994).

Loss of Talent and Valuable Contributions

Morse and Bruch (1970) pointed out that women were the largest untapped pool of resources in this country. They cited significant loss to national growth and the economy of creative products and ideas, as well as a loss of potential fulfillment to women. They suggested that dominant-position women, in addition to being seen at odds with femininity, were a threat to the male ego. He posited that the social role of women to be "conforming and dependent" and to be the major child care givers rather than pursue a career put them at a disadvantage both in aspirations and achievement.

Stereotypes of acceptable female behavior may limit women's advancement. Female leaders have received negative evaluations, for example, if they were perceived to exhibit a stereotypic "masculine" leadership style (Eagly, Makhijani, & Klonsky, 1992). Studies 25 years after Morse and Bruch have revealed similar factors influencing aspirations and achievement of young women, especially during adolescence.

Loss of self-esteem and fulfillment are a response to the limitations imposed by socialization. The barriers to women begin early in life. Studies (Hollinger, 1991b; Mann, 1994; Orenstein, 1994; Sadker & Sadker, 1994) and popular literature (Pipher, 1994) have described the female situation: By the time a young woman reaches adolescence, a particularly vulnerable age, she has experienced over a decade of sex role socialization and societal stereotypes,

often learning to fear success, avoid mathematics and the sciences, refuse to assert herself, lower her expectations for academic and career achievement, attribute successes, especially in nontraditional areas such as math, to diligence, effort, and acquired skill rather than ability, and perceive herself as lacking the agentic attributes essential for controlling her own destiny.

The conclusion of these studies is that, in expecting less assertive qualities from females than from males, placing media emphasis on appearance and compliance (Pipher, 1994), relegating career to a secondary place, and assuming the female to be nurturing caretaker of the family, adults have created an impossible series of conflicts for females. By telling them that they should pursue a career and be the best they can be and at the same time that they should fulfill all the traditional roles of family, marriage, and nurturance, another set of conflicts is created.

Changes and New Opportunities

Astin (1985) found positive trends that continued to affect women as they prepared for and entered the workplace. These trends include increased longevity; an increased divorce rate; proliferation of nontraditional family constellations; medical advances in reproductive technology allowing, for example, postponing of motherhood and other controls over their lives and bodies; codification of women's rights; and changes in the economy, including a decline in

unskilled jobs and an increase in the number of technical, service, and managerial jobs.

Herr and Kramer (1992) suggested another trend, though less positive, increasing the likelihood of changes in the career aspirations of women. He posited that the traditional women's occupations are those that are most in oversupply: teacher, librarian, social worker, and so forth. Women in higher education find themselves pressured to select nontraditional careers or be unemployed (Herr & Kramer, 1992).

Need to Assist Girls in Career Development

In a nationwide study of 3,000 4th- through 10th-grade students, the American Association of University Women examined the impact of gender on self-esteem levels, career aspirations, educational experiences, and math-science interests (AAUW, 1992; Sadker & Sadker, 1994). The studies revealed that, as girls grow up, they lose confidence in their abilities, expect less from life, and lose interest in challenging courses of study and rewarding careers, particularly pursuits involving math and science.

Schools play a critical role, documented by Sadker and Sadker (1994), in limiting girls' aspirations through various forms of gender bias, including a lower quality and quantity of classroom attention. The AAUW (1992) report eloquently made a plea for change:

> By the year 2000, 66 percent of the new entrants to the work force--and 47 percent of the entire work force will

> be women. The economy will need many more well-educated, highly skilled workers, including at least a half million more scientists and engineers. Tomorrow's workers are in today's classrooms, and, to preserve what remains of America's competitive edge, our schools must provide girls with the education and encouragement they need. When girls are left out and left behind in school, America competes in the world economy with only half its team in the field. (p. 8)

The sexual stereotyping of occupations begins at a very young age. For many individuals, this stereotyping remains endemic to careers throughout life. For example, using a sample of third- and fifth-grade students, MacKay and Miller (1982) discovered that boys had more complex interactions with things in their occupational choices (environments) than did girls. Interacting with things was perceived as masculine; interacting with people was perceived as feminine; and interacting with data was seen as both masculine and feminine.

That young boys' perceptions were even more stereotyped than those of girls was given support in the work of Teglasi (1981), who found that boys' selections of both toys and occupations in grades 1-6 were more sex-typed than were the selections of girls. One study (Robison-Awana et al., 1986) asked seventh-grade boys and girls to respond to a self-esteem inventory both as themselves and as they thought a person of the opposite sex would respond. Results showed that both boys and girls believed girls had lower self-esteem, thus concurring with a stereotypical belief. An

exception was that the more academically talented seventh-grade females rated boys significantly below themselves.

Studies of women in adolescence and young adulthood have demonstrated that young women select from only a few occupational possibilities and often on a sex-typed basis. Results of research with adolescents has consistently shown that females have lower occupational expectations, largely as a consequence of traditional sex role socialization (Bem, 1981; Betz & Hackett, 1991; Post-Kammer & Smith, 1985; Sadker & Sadker, 1994).

For adolescent females, there is reason to believe that domestic and work-role expectations are related to both generalized sex role attitudes and specific plans for adult domestic roles (Aneshensel & Rosen, 1980). Many females see the sexes in stereotypical ways in that they believe women and men should enact different domestic and occupational roles.

Even at the college level, students' interests in an occupation may be altered by suggestions of male or female domination in the occupation. When, for instance, male college students were told that in 10 to 15 years women will constitute 50% to 60% of all attorneys, their interest in law as an occupation was significantly less (Collins, Reardon, & Waters, 1980).

The fact that many occupations are sex-traditional simply perpetuates sex role stereotypes, sustaining the

division of labor as a self-fulfilling prophecy (Yount, 1986). The need for intervention to relieve sex stereotyping and reduced aspirations and to decrease conflict between the values of socialization and personal growth is summarized by Herr and Kramer (1992):

> The more females can be encouraged by teachers and counselors to expand their career aspirations and view of life roles and the more both males and females can be helped to examine their own restrictive and restricting attitudes, the more likely it is that a genderless egalitarianism will exist in the future. The primary point of attack is, logically, at the earliest age possible; intervention becomes increasingly difficult as stereotypes become more ingrained. (p. 240)

Building Vocational Self-Concept: Self-Esteem, Sense of Control, and Self-Efficacy

An explanation of the manner in which the self-concept is formed explains how socialization allows the formation of internal barriers to success for women. The "self" is "perceiver" (Super, 1963) which organizes "percepts" into "concepts" that determine behavior. A self-concept, then, is the individual's picture of herself: what is perceived as self with accrued meanings. The concept of self is a picture of oneself in some role, situation, or position, performing some set of functions, or in some web of roles. Role concepts may be functional (i.e., not involve others, a skier) or social (related to the expectations and relationships with others, a salesman) (Super, 1963).

Concepts function as frameworks into which new percepts are integrated. Concepts become a perceptual "set," predisposing an individual to attend to certain classes of

stimuli and to organize them in a certain way. Self-concepts are, hence, relatively enduring and self-perpetuating. The vocational self-concept that affects vocational preference is a function of what is known (learned) by the individual (Super, 1963).

Each person, according to Super, has a number of self-concepts and a well organized or poorly organized self-concept system. The term "vocational self-concept" was used by Super to denote self-concepts that are believed relevant to vocational choice and success and are translated into a vocational preference. Vocational self-concept is a "constellation" of self-attributes that the individual considers vocationally relevant. This constellation may or may not have been translated into a vocational preference (Super, 1963).

Therefore, it is important that a young woman, in making decisions affecting choice of and preparation for a vocation, be aware of the percepts and concepts pertinent to her vocational self-concept. She may not consider various parts of her self-concept relevant to career decisions at any one time in her career path. She may not be aware of cultural influences and socially prescribed gender roles as part of her self-concept. It is important, therefore, that a young woman be made aware of the components of her self-concept. She then may choose to consider those components relevant to her career preferences and choices. It follows that, in

order to affect career choice, the individual must be encouraged to examine existing concepts and acquire additional information and experiences. The additional information may alter perceptions and self-concept and, therefore, vocational self-concept and choice.

Super argued that self-report is a valid assessment of an individual's self-concept. According to Super, self-report is most likely to reveal the occupation an individual will attempt, as compared to the occupation in which one will succeed (Super, 1963).

Self-concept formation, according to Super (1951), shifts from the I of the baby, later to the parent, and then to the peer group as major influence. If an individual has low self-esteem, the self-concept is determined by influences outside the individual. In high self-esteem, the self-concept is determined internally.

Korman (1967) postulated that the individual's career choice is influenced by social pressures often at variance with the individual's personal wishes. Korman proposed that self-esteem acts as a mediator: High-self-esteem individuals would seek vocational roles congruent with their self-perceived characteristics, and low-self-esteem individuals would be less likely to do so.

Korman conceived of two assumptions in career choice: (a) that individuals choose roles that maximize their sense of cognitive balance or consistency and (b) that their self-

esteem or general valuation of themselves is part of their cognitive structure. Self-esteem is defined by Korman as a person's characteristic evaluation of him[her]self as an individual; low self-esteem is characterized by a sense of personal inadequacy and an inability to achieve need satisfaction in the past; high self-esteem is defined by a sense of personal adequacy and a sense of having need satisfaction in the past (Korman, 1967).

In Korman's study of 126 college students, he found that low-self-esteem persons were more accepting of situations in which they did not think themselves adequate and where they actually tended not to be adequate. Completing the loop, low-self-esteem persons then set themselves up in a situation that perpetuated low self-esteem. High-self-esteem persons, on the other hand, tended to wind up in situations in which they perceived themselves as adequate and competent.

The theme of the importance of self-perceived ability is seen in work by other researchers. Hackett and Betz (1981) proposed that through socialization experiences individuals developed self-efficacy beliefs about their ability to perform various occupations. According to Hackett and Betz's model of career choice, an individual's perception of job options is influenced by his or her self-efficacy expectations. Gottfredson (1981) described occupational limits that children set for themselves based on a perceived structure of opportunity, for example, perceived social

class. Hackett and Betz, on the other hand, described the process by which individuals maintained those limits. For example, girls do not simply view male-dominated occupations as gender inappropriate but, through various experiences, perceive themselves to actually lack ability to perform in these occupations (Hannah & Kahn, 1989).

Self-Esteem

Self-esteem has been the subject of many studies. Girls' self-esteem has been found to differ from boys, especially at adolescence, and to be linked to issues of sex role identity. Ego functioning and self-esteem have been found to be related to sex role identity for girls but not for boys (Hurtig & Peterson, 1982). In other research, it has been found that girls, as they approach adolescence, remain at a stable level of self-esteem, while that of boys increases (Fein, O'Neill, Frank, & Velit, 1975). The result is an apparent drop in self-esteem for girls compared to boys.

Self-esteem in girls has been linked to achievement only in later adolescence. As compared with males, whose self-esteem is linked throughout adolescence to mastery, girls in one study showed self-esteem in early adolescence linked to parental support and only later to sense of mastery (Brutsaert, 1990).

Another study showed lowered self-esteem in female adolescence. Simmons and Rosenberg (1969) interviewed a

random sample of 1,988 children in grades 3 through 12. Girls showed a significantly more disturbed image of themselves, were more self-conscious, and reported greater instability of the self-image and lower self-esteem than males. African-American girls, interestingly, showed less differences compared to boys. Other differences in Latina and African-American girls have been noted (Debold, 1995).

In other studies, higher self-esteem correlated with nontraditional attitudes for girls in grades 3 through 6, including links to belief in multiple roles for women, the appropriateness of role reversal in the home, and the rejection of the belief that a woman's place is only in the home. Nontraditionality in career aspiration and choice was strongly correlated to total self-esteem and four components of self-esteem: self-liking, competence, assertiveness, and independence. On the other hand, boys' self-liking was significantly related to the belief that a woman's place is only in the home (Hughes, Martinek, & Fitzgerald, 1985).

Actual interventions with adolescents to influence self-esteem are rare. In a search of literature over the past 10 years, only one group intervention was found. Omizo and Omizo (1988) worked with 30 experimental and 30 control subjects, children of divorced families, randomly assigned to three groups. The results revealed that the 10 sessions over 10 weeks significantly and positively affected self-esteem and resulted in more internal locus of control.

Bem (1981, 1995) wrote that, of all existing barriers, sex role socialization's impact on the child's developing self-belief system is the most pervasive and limiting. Bem perceived that the individual's self-concept system was influenced by sex role socialization to such an extent that only self-beliefs congruent with the individual's gender schema were incorporated into the self-concept.

Researchers have shown, for example, that gifted female adolescents reported higher social and artistic abilities, values, and interests that were stereotypically feminine rather than investigative and realistic ones, which were stereotypically masculine (Fox & Richmond, 1979; Hollinger, 1983). Agentic attributes as well as aspirations toward math and science (nontraditional) may be screened from the self-concept if seen as stereotypically masculine (Hollinger, 1983, 1985, 1991a, 1991b; Hollinger & Fleming, 1988).

Conflicts for girls between "social reality" and "personal reality" were recognized by Rezler in 1967. Rezler found that girls with "pioneer" interests often settled for a traditional career rather than pursuing their genuine interests. Korman (1967) recognized a similar conflict and proposed that self-esteem acts as a moderator between social and personal interests. Korman suggested that high self-esteem individuals would seek vocational roles congruent with self-perceived characteristics and low-self-esteem individuals would not.

Lewis (1968) theorized that women have "choice points" in their lives in which questions of self versus social self (i.e., functional versus social) were asked. Examples were as follows: Will I have a career? Should I prepare for a career or marriage? If I marry, will my husband approve of my career?

Gilligan (1982, 1988) of the Harvard project suggested that girls are guided through a different socialization process than males very early in life. Prior to age 3, awareness of socialization in boys and girls is fairly consistent. By age 4, however, they contend that boys begin to break their maternal dependence, moving toward an autonomous independent stance as Erikson (1950) and others have written. Girls, however, continue to be nurtured toward the relational values of intimacy and empathy, according to Gilligan.

By early adolescence, girls are already confronting conflicts within a society that values the independence that is typically nurtured in males. Female role models are seen as either railing against the traditional male orientation or acquiescing and trying to find self-fulfillment by playing according to the male gender rules (Gilligan, 1982, 1988).

By the ages of 11 to 14, many girls have discovered that their intimacy, sensitivity, and empathy are valued only in some theaters, few of which are achievement- or career-oriented. Gilligan (1982) concluded in her research that

girls experience conflict between remaining responsive to themselves and the influence of conventions of feminine goodness. In remaining responsive to others, they find conflict with the values placed on self-sufficiency and independence. She added that at this point of awareness a girl may silence her distinctive voice, responding in a manner not congruent with her sense of self.

According to Kline and Short (1991), increased levels of depression, discouragement, hopelessness, and fear were found among girls in their later teens. Because of gifted girls' increased levels of awareness, sensitivity, and potential, their conflict and loss were magnified. In earlier grades, 4 through 6, gifted girls found their giftedness an advantage and reported that they possessed a more positive self-concept and more internal locus of control than nongifted females. It appeared that, for this age, being successful in school resulted from following the traditional female roles of exhibiting obedience and doing what was expected. However, Callahan (1980) pointed out that the behavior that helped females do well in school earlier may have been detrimental to them later in the competitive professional world.

A study by Li (1988) supported the concept that fourth- and seventh-grade gifted females had good self-perception in scholastics. Li's research measured self-perception in the areas of scholastics, socialization, athletics, appearance, conduct, and self-worth. Gifted females had a more positive

perception of their scholastic abilities than did gifted males or nongifted girls of the same age.

As females became adolescents, however, their perception of their giftedness changed. As gifted girls became older, they were shown to choose different strategies from boys in coping with their giftedness, especially between the ages of 13 and 15. The girls more often downplayed the value of their talents and associated less often with peers who were also gifted (Buescher, Olszewski, & Higham, 1987).

Theorists Ginzberg and Super demonstrated with their models of career development that adolescence can be an especially vulnerable stage of development for teenaged girls. Societal pressures are especially influential to a young woman seeking individuation from parents and opening to peer influence. At the same time, important career decisions are being made in terms of course choice and degree of involvement in making good grades, as well as choices of extracurricular activities that might enhance talents and strengths for later career training and career choice.

Ginzberg theorized about the stage of adolescence in career development. Super described how the self-concept is formed with input from the environment. Astin (1985) and Gottfredson (1981) attempted to develop models that explained career development for females and focused on specific variables and their relationships to career development for female adolescents.

Astin focused on opportunities and motivation. She used the concept of "structure of opportunity" to depict the way social forces shape and reshape occupational decisions. Work motivation, according to Astin, is the same for women and men, but different choices are made because of differences in early socialization experiences, as well as because structural opportunities are different. Perceptions of accessibility of alternative forms of work and their relative capacity to satisfy three basic needs (survival, pleasure, and contribution) are influential in career decisions.

Gottfredson (1981) described career development as development of "cognitive maps" with boundaries of acceptable jobs based on tolerable sex-type images, tolerable levels of prestige, and tolerable levels of effort to attain them.

The results of the emotional conflict experienced in adolescence can bring depression and lowered self-esteem (Bandura, 1989; Gilligan, 1982; House, 1974; Kline & Short, 1991; Rodenstein, Pfleger, & Colangelo, 1977; Toufexis, 1990). Bandura (1989) explained the phenomenon of depression, which relates directly to girls' expectations, aspirations, and career decision-making. He wrote that perceived self-inefficacy to fulfill desired goals that affect evaluation of one's self-worth and to secure things that bring satisfaction to one's life gave rise to bouts of depression.

Myra and David Sadker (1994) summarized the phenomenon of adolescent girls' struggle to find their voice. Young women are experiencing puberty and so are physically vulnerable. They experience a closing of options as a conflict occurs between societal expectations and their own development and achievement. The cultural emphasis on being thin, pretty, and popular weights social success over academic achievement for girls. In addition, the schools and culture tell them that they must silence their honest feelings, that math and science are male domains, that "helpless" is better than being "able," and that boys are the smart ones (but they don't really try) (Sadker & Sadker, 1994).

Sexual identity is an important part of self-esteem for the adolescent, and social messages create conflict for young women. Authors cite conflicts between media messages that women's bodies invite sexual activity, but sexual activity is "bad" (Miller, 1991); that discussions of sex are often limited to victimization, disease, and problem pregnancy (Schultz, 1991); and that women's bodies are sites of shame, danger, and coercion (Marecek, 1990).

Other groups of girls may be more vulnerable to social influences. Girls' traditional socialization puts great pressure on lesbian girls to hide their sexual orientation, adding to lowered self-esteem (Schultz, 1991). Some issues of self-esteem in adolescence may be a development stemming

from the greater prevalence of child sexual abuse among girls (Cutler & Nolen-Hoeksema, 1991). Intervention to raise self-esteem should include experiences and information to allow examination of sex role concepts, socialization influences, and environmental barriers as they affect achievement of goals.

Self-Efficacy

Self-efficacy refers to expectancy for success at a task on which success is perceived to be dependent on ability (Kirsch, 1986). Bandura (1989) stated that individuals make "causal contribution to their own motivation and action" (p. 1175) within a system of three reciprocating causes: action, cognition, and affect, as other personal and environmental events interact. He wrote that people's self-efficacy perceptions affect cognition, motivation, and affective processes.

People, according to Bandura, tend to avoid activities and situations they believe exceed their coping capabilities but readily undertake activities they believe themselves capable of handling. The more efficacious people judge themselves to be, the wider the range of career options they consider appropriate, and the better they prepare themselves educationally for different occupational pursuits. Self-limitation of career development arises more from perceived self-inefficacy than from actual inability. By restricting choice behavior that can cultivate interests and

competencies, self-disbeliefs create their own self-fulfilling prophecy (Bandura, 1989).

Research in career development self-efficacy has led to developing the concept of career or occupational self-efficacy and operationalizing methods. Hackett and Betz (Hackett & Betz, 1981; Betz & Hackett, 1991) developed a way of measuring self-efficacy related to career development of young women. They proposed that women, as a result of their socialization, lack strong expectations of personal self-efficacy in relationship to many career-related behaviors. As a result, they fail to fully realize their capabilities and talents in career pursuits. Hackett and Betz used Bandura's (1977, 1989) concept of self-efficacy expectations to explain how a mediating cognitive process links socialization to occupational behavior.

Expectations about careers and ability to prepare for a career and succeed in the career are important, especially for adolescent females making decisions about course choices and levels of achievement. Bandura (1977, 1989) proposed that those who are assured of their capabilities heighten their level of effort and perseverance, whereas those who experience self-doubts about their capabilities are more easily dissuaded by failure. Career self-efficacy operates in two arenas: job situations and beliefs about women in general (Brooks, 1988).

Hackett and Betz (1981) proposed a self-efficacy paradigm of female career development employing constructs from Bandura (1977, 1982). Self-efficacy expectations were postulated to have a particular pertinence for understanding and facilitating career development in women.

Hackett and Betz (1981) tested self-efficacy expectations in college men and women and the range of career options considered. Respondents were asked to consider 10 job titles representing female-dominated occupations and 10 representing male-dominated occupations and to indicate degree of interest in each occupation plus extent of consideration as a possible career. Estimates of self-efficacy were obtained by asking respondents to indicate for each occupation both whether they could successfully complete the required training and whether they could perform the job tasks.

Respondents were asked to indicate on a scale of 1 to 10 how confident they were of the estimates of their success. Using 134 female and 101 male undergraduates as subjects, the researchers found that male efficacy estimates were comparable across predominantly male and female occupations; female efficacy estimates were lower for predominantly male occupations and higher for predominantly female occupations. The findings supported Betz and Hackett's assertions that self-efficacy is associated with perceived career options and that gender differences in self-efficacy beliefs are

associated with gender differences in perceptions of nontraditional, cross-gender occupations.

In research that followed, participants were mainly college students. Layton (1984) and Lent and Hackett (1987) found results similar to the Hackett and Betz (1981) research, in that self-efficacy of female- and male-dominated occupations differed with gender. Research using college students has consistently shown that self-efficacy beliefs are predictive of important aspects of career behavior such as college majors and academic performance in certain fields.

Lent and Hackett (1987) suggested that, since Bandura views self-efficacy as distinct from self-esteem or self-worth, involving domain- or task-specific expectations regarding one's performance (one may have very favorable expectations about performance on a calculus exam, but overall low feelings of self-worth), then measures of global self-esteem should not correlate too highly.

In self-efficacy research with adolescents as subjects, fewer occupations yielded gender differences than with college students. With 108 eighth- and ninth-graders (Post-Kammer & Smith, 1985), self-efficacy contributed less to predicting a range of occupations considered. It was thought that because of the students' levels of career development, they might not be using self-efficacy estimates in considering career options, or they might lack clarity about the competencies required by various careers, or that high

school and college provide added socialization experiences, causing gender differences in self-efficacy to emerge at a later stage.

Post-Kammer and Smith (1985) added four math-related occupations and investigated gender differences in the consideration of math-oriented and non-math-oriented occupations. Regression analyses revealed that both self-efficacy and vocational interests contributed significantly to the prediction of both math-related and non-math-related occupational consideration for females. On the other hand, only interests were predictive of occupational consideration for males. Gender alone was not a significant predictor.

Post-Kammer and Smith (1985) suggested that women may be more influenced by self-efficacy in considering occupations. Sex differences emerged in 3 of the 24 occupations, all 3 math-oriented, traditionally male occupations (engineer, computer programmer, and drafter). For females, it appeared that consideration of math careers involved a confidence factor that was not present for males. Consideration of math careers for women was heavily influenced by their confidence in meeting the educational requirements. The authors felt that consideration of careers might have been a more complex process for females than for males and that special needs should be addressed, perhaps through group discussion.

Differences also have been found in career self-efficacy for American-Indian, white, and Hispanic high school students

(Lauer & Jones, 1991). Hispanic students seemed to hold high aspirations for occupations but lower expectations for achieving them.

In summary, compared to undergraduates, junior-high students did not have as many differences in career self-efficacy. Interest emerged as the major predictor of consideration of occupations. Additionally, boys and girls had similar confidence in meeting the educational requirements and performing the job duties for most of the occupations. For females, high math preparation requirement careers of drafter, engineer, and computer programmer were less considered, and they showed less confidence about meeting the educational requirements and job duties. More occupations had sex differences at the undergraduate level than at the junior-high grade level.

Lent and Hackett (1987) emphasized the potential value of future research in determining treatment interventions to enhance self-efficacy and thereby remove restrictions on career development. Such efforts, they suggested, might be especially valuable where clients are underestimating their competence with respect to a desired educational or vocational goal or where vocational beliefs might be limiting clients' range of perceived career options.

The researchers cautioned that clients might filter experiences through preexisting cognitive appraisal mechanisms. They also cautioned that self-efficacy is only

one variable; ability and motivation as well as expectations influence performance. They proposed that self-efficacy interventions would be most effective to the extent that they enhance self-beliefs with respect to a desired target of treatment, for example, career decision-making ability.

Brooks (1988), in analyzing career development of young women according to Bandura's model, decried the lack of opportunities for vicarious learning (role models), the presence of higher levels of anxiety for women as compared to men in choosing nontraditional, masculine sex-typed careers, and lack of verbal persuasion (often verbal discouragement) for nontraditional career pursuits. She suggested interventions that include awareness of the factors that affect self-efficacy.

After review of the literature about self-efficacy, therefore, one would approach intervention using Bandura's theory by helping women to increase awareness of their competence to perform tasks by helping them to develop awareness of barriers and strategies to overcome environmental influences and to recognize the reciprocal relationship of behavior, affect, and cognitions.

Locus of Control

Locus of control is defined (Rotter, 1972, 1975) as an attribute of personality on which individuals are distributed according to their degree of belief in their own control over events in their lives. Internals believe that events occur

primarily as a result of their own behavior, while externals see events following their behavior as primarily determined by outside forces (e.g., luck, chance, powerful others, environment). Expectancies for outcomes and reinforcement in each situation are determined not only by specific experiences in that situation but also by experiences in other situations that the person perceives as similar. Rotter cautioned against control expectancy being regarded as a trait without regard to the value of the reinforcement to the individual.

Layton (1984) compared locus of control and self-efficacy. Both theories arise from social learning theory. Rotter's theory is more tied to behavioral learning theory and emphasizes reinforcement as valued by the subject. Bandura's theory of efficacy emphasizes the subject's cognitions about competence to perform the task perceived to provide the desired reinforcement. Rotter emphasizes outcome expectations, while Bandura emphasizes efficacy expectations. Rotter's theory requires that the reinforcement have value to the individual in order to predict the behavior. Bandura requires that the individual must perceive himself or herself to have the skills necessary to perform the behavior and that there must be adequate incentives to do so. If both factors are present, then efficacy expectations can be hypothesized to be a major determinant of behavior.

A study by Burlin (1976) investigated the relationship of locus of control to the aspirations of adolescent females. In this study, 139 11th-grade students were asked to choose real and ideal occupations. Occupations were classified by the authors as innovative, moderate, and traditional, based on percent of female workers actually in each occupation. Innovative choices were made more often as an ideal choice rather than a real aspiration. There was a significant relationship found between agreement of real-ideal and locus of control. More internals than externals aspired to an innovative occupation in both real and ideal selections. Many more externals than internals moved from a moderate occupation in their ideal occupational aspiration to a traditional occupation in their real aspiration.

Burlin asserted that those who were more able to free themselves from environmental constraints were able to do so because they believed in their ability to accomplish a rewarding goal. He suggested that counselors must assist young women through individual and group counseling to act more freely on occupational alternatives by examining their own sex role conditioning, by alerting clients to role models, and by encouraging career education free of occupational stereotypes.

In a descriptive study investigating sex-typed occupations and career preparation of 73 male and female participants, there were no differences in external

attributions of success by males. For females, however, feminine females were more likely to externally attribute success than androgynous or masculine females (Gackenbach & Taylor, 1980).

Using a case study approach with a small sample (four), one researcher (Zaffran, 1983) investigated internality and externality in various areas: goals, leadership, sense of self, decision-making, and so forth. He found that externality/internality was more situational rather than subjects' being globally purely internal or purely external.

Locus of control has been shown to be affected by intervention. In a study (Harris, 1981) of the effects on 32 female students (mean age 33.67 years) of a psychology of women course at a university, subjects exhibited a shift toward greater internality on a measure of locus of control (Adult Nowicki-Strickland). The course was presented over 8 weeks. It was suggested that the change in locus of control occurred as a result of change in the subjects' cognitions about themselves rather than a shift in cognitive processes or a change in some fixed personality trait.

Nowicki and Walker (1974) found that fifth- and sixth-grade girls with higher internal locus of control also had higher school achievement scores as measured by the Metropolitan Achievement Test. The authors concluded that the expectancy of personal control over school performance resulted in greater actual control for their subjects, who

were both African American and Anglo. Another study (Plotnik, 1980) of 12,686 females aged 14 to 21, found internal control, positive attitudes toward school, and high educational expectations to be correlated with negative likelihood of premarital pregnancy.

In another study, Yount (1986) investigated the relationship of values, internal-external locus of control, and two career maturity variables. The values clean, forgiving, and helpful were ranked as more important by females aspiring to traditional occupations, while the values courageous, imaginative, and independent were ranked as more important by women aspiring to innovative occupations. Subjects were 590 students, 91% of the female students enrolled in grade 11 in six rural schools in Ontario, Canada. Yount compared his study with Burlin's (1976) study and found it similar in regard to finding no sex link to locus of control. Rotter's Locus of Control Scale was used. Lokan, Boss, and Patula (1982) found internality in high school students also related to greater career maturity.

A study by King (1989) explored the relationship between locus of control and several other variables including family cohesion, family aspirations for the individual, and family culture (i.e., reading, educational, and recreational opportunities) with a sample of 318 Caucasian, middle- to upper-middle class adolescents. Family cohesion was associated with a more internal locus of control which was,

in turn, significantly associated with higher career maturity scores. Higher cultural participation scores were also associated with more internal locus of control for females. Family cohesion, internality of locus of control, and career maturity were related for females (King, 1989).

Benson and Deeter (1992) investigated social support (i.e., information leading the individuals to believe that they are cared for and loved, esteemed, and a member of a network of mutual obligations) and locus of control as moderators of the effects of stress in adolescents. In the study, 100 male and female volunteer students in grades 10 to 12 were recruited from psychology or sociology classes or study halls. The Life Events Checklist, the Social Support Questionnaire, the Nowicki-Strickland Locus of Control Scale, and the Beck Depression Inventory (short form) were administered. Locus of control was significantly related to depression. Externals expressed depressive symptoms to a greater extent than internals. The authors did not find, contrary to expectations, that locus of control interacted with social support and life stress to predict depression. They suggested that locus of control does not buffer the effects of negative life events on depression (Benson & Deeter, 1992).

Actual interventions with adolescents to influence locus of control are rare. Only two studies investigating efforts to affect locus of control with adolescents were found in a

search of research conducted since Rotter's pioneering work in 1972. Both studies showed that locus of control was affected by the treatment. In Simmons and Parsons (1983), underclass adolescent girls showed no increase in internality and reported a significant decrease in perceived competence after completing the same program. Working-class girls, however, achieved an increase in internality and perceived competence. It was suggested that programs must be designed differently for adolescents of different backgrounds.

Only one group counseling intervention was found. Omizo and Omizo (1988) worked with 60 participants, 30 experimental and 30 control, children of divorced families, randomly assigned to three groups. The results revealed that the 10 sessions over 10 weeks significantly and positively affected self-esteem and resulted in more internal locus of control.

Intervention using Rotter's theory would require teaching women that their actions make a difference in their ability to control their reinforcers. A counseling intervention can help clients to develop a generalized belief that they can be in control of their lives and help them develop beliefs in their self-efficacy in more specific tasks. Information about social influences and their relationship to internal barriers can be used. In general, an intervention can help young women be aware that career choice is not a passive process and that certain careers are no longer closed to them by society.

Career locus of control is a concept not yet seen in the professional literature. It is defined by the researcher as beliefs about success in career preparation and choice perceived as controlled by the individual (internal) or not controlled by the individual (external). Locus of control research has found that females who aspire to nontraditional careers have more internal locus of control. Locus of control in general becomes more internal as adolescents grow older (Nowicki & Strickland, 1973). Place (1979) advocated intervention with adolescents to increase internality of locus of control. In a study of 130 female managers, the critical factor in their rise to managerial positions was found to be an internal locus of control beginning as an adolescent.

Career Development for Females: Theorists and Interventions

Ginzberg's (1987) definition of career development includes the aspects both of socialization influences and the growth of self. He includes behavioral processes and the influences on them as crucial in developing work values, decision-making styles, self- and career-identity, and choice of occupation. It is during adolescence that young women are most challenged to integrate self and social values, at a time historically of rapid change in gender roles.

When Ginzberg (1987) described a developmental theory of career development, he conceptualized the process for the adolescent as a "tilting," occurring during the tentative-

exploratory stages of adolescence. The young person, once subjectively making decisions based on interests, capacities, and values, now is concerned with the opportunities and limitations set by reality. The young woman in high school, then, is her most vulnerable. She is trying to integrate her own and others' perceptions of reality and of herself. Environmental and social influences which might affect her self-esteem and her self-perceived capacity for success are particularly influential.

Career Development Theorists

Ginzberg, an economist, pointed out problems to be considered in the course of the career development of adolescents but did not offer a particular strategy. Ginzberg and colleagues (Ginzberg, Ginsberg, Axelrad, & Herma, 1951) asserted that occupational choice is a developmental process, a series of decisions made over a period of years.

Occupational choice, according to Ginzberg, develops relative to several factors: the life stage tasks of the individual, individual values, emotional factors, amount and kind of education, and the reality of environmental pressures. Ginzberg has since rethought his three basic principles of *process*, *irreversibility*, and *compromise:* process (remains open and ongoing throughout the lifespan); irreversibility (individuals continually reassess their circumstances, which include consequences of previous

decisions, and the economy); and compromise (individuals optimize, trying to improve the fit between their changing selves and their circumstances).

Ginzberg described the factors involved and the process of integrating personality, environmental influences, and education in occupational decision-making. However, he did not pursue the development of strategies for working with individuals. In particular, he did not focus on the process, influences, and strategies for working with young women.

Gottfredson (1981) focused on the interactive relationship of internal and external factors. Gottfredson integrated a psychological and social systems perspective, introducing the construct of opportunities and barriers as mediators in occupational considerations. Her model, a developmental one, focused on social class, intelligence, and sex as important variables in the process of occupational development.

Astin (1985) pointed out limitations in Gottfredson's model, however, in that she did not account for the fact that social change can alter one's self-concept and, thus, prompt individuals to reconsider occupations that had earlier been eliminated. Astin also found unclear how the emergence of new occupations altered a person's occupational map. Pertinent to this study, Gottfredson also added the concept of a hierarchy of decision-making criteria in which the sex role is the last to be overridden.

Gottfredson offered important concepts in studying the career development of young women, adding the idea of a hierarchy of decision-making criteria in which the sex role is the last to be surrendered and, therefore, the most restrictive if stereotyped. Astin added the concept of structure of opportunity, defined as the perceptions of what choices and options are available and attainable. Brown and Gilligan (1990) emphasized the role of self-perception further in adding that a result of the societal valuing or devaluing is emotional risk, low assertiveness, and low self-esteem.

Hackett and Betz (1981) and Betz and Hackett (1986, 1987, 1991) together proposed a model of women's career development based on socialization. They found that women, as a result of their socialization, lacked strong expectations of personal self-efficacy in relationship to many career-related behaviors and thus failed to fully realize their capabilities and talents in career pursuits.

Hackett and Betz postulated that it is not always a matter of what the person can do but that what one can do is not valued by society or does not fit in. That is, expectations, or what is perceived of as attainable within the context of the social environment, interact with internal factors. They used self-efficacy to explain how mediating cognitive processes link socialization to occupational behavior.

Researcher Constance Hollinger (1991b) acknowledged the need to develop career guidance for high-achieving young women:

> Given the current social and economic context, today's gifted female adolescent will, in the near future, enter the world of work, if not out of choice, then out of necessity. She will do so in a decade of uncertainties and a social climate in which return to the traditional may afford the only perceived source of security. She will find that while some career doors have been opened, inequities exist and many doors remain closed. Given this scenario, many gifted young women will need assistance as much as ever before. (p. 136)

Aware of the critical importance of social and environmental variables in educational and career decisions and incorporating Bandura's social learning theory (1977) as explicated further by Hackett and Betz (1981), Astin (1985) demonstrated with her model how women's occupational expectations are shaped by socialization experiences.

Astin used the concept of "structure of opportunity" as a way of depicting how social forces shape and reshape occupational decisions, placing emphasis on the changing structure of opportunity and its impact on contemporary women and their occupational behavior. Her premise was that the basic work motivation is the same for men and women, but different choices are made because of differences in early socialization experiences, as well as because structural opportunities are different. Astin explained how general psychological and sociostructural factors are translated into expectations about work and ultimately into individual choices.

According to Gottfredson (1981), the self-concept is composed of different elements, ranging from appearance to major life roles. The major vocationally relevant elements are gender, social class background, intelligence, and vocational interests, competencies, and values. These elements are incorporated into one's self-concept at different stages of cognitive development as one's self-concept and view of the world become more differentiated and complex.

In a concept similar to Ginzberg's occupational self-concept, Gottfredson suggested that persons create their own cognitive maps of acceptable alternatives based upon social space, the person's view of where he or she fits into society. Within the construction of such individualized cognitive maps of job-self compatibility, children and adolescents create boundaries of acceptable jobs based on tolerable sex-type images, tolerable levels of prestige, and tolerable levels of effort to attain them.

Although Gottfredson's work incorporated developmental issues, socialization, self-concept, and the interactive nature of the occupational decision-making process, she did not focus on developing strategies for working with the career development of young women.

Career Development Experiences and Activities

Self-esteem affects career choices, as shown in an AAUW (1992) report. A nationwide study confirmed the findings of

earlier individual studies that girls' self-esteem drops in adolescence (AAUW, 1992). Low self-esteem, according to the report, leads to a lack of self-confidence and lowered aspirations and affects choices of courses of study and choices of careers. The drop in self-esteem for girls coincided with a decline in interest in math and science.

Self-reported reasons for the decline in interest for girls differed from boys according to the AAUW Report (1992). Girls thought themselves not smart enough. Interventions to raise self-esteem include experiences and information to allow examination of role concepts, socialization influences, and environmental barriers as they affect achievement of goals in the past and in the future and how self-esteem affects career development.

Self-efficacy beliefs help determine levels of motivation, degree of persistence, and range of career choice (Bandura, 1989; Brown & Larkin, 1984; Lent, Brown, & Larkin, 1986). Self-efficacy for young women for nontraditional careers drops during adolescence. Lent and Hackett (1987) emphasized the potential value of future research in determining treatment interventions to enhance self-efficacy and thereby remove restrictions on career development. Such efforts, they suggested, might be especially valuable where clients are underestimating their competence with respect to a desired educational or vocational goal or where vocational

beliefs might be limiting clients' range of perceived career options.

The researchers cautioned that clients might filter experiences through "preexisting cognitive appraisal mechanisms." They also cautioned that self-efficacy is only one variable; ability and motivation, as well as expectations, influence performance. They proposed that self-efficacy interventions would be most effective to the extent that they enhance self-beliefs with respect to a desired target of treatment, for example, career decision-making ability.

Self-efficacy expectations are acquired in four ways: through performance accomplishments, through vicarious experiences (i.e., observations of role models), through verbal persuasion (support and encouragement of others), and through emotional arousal (e.g., reduction of anxiety); therefore, an ideal intervention to improve self-efficacy would include opportunities for the four experiences suggested by Bandura. Interventions for self-efficacy must include examining the role that cognitions about success play in influencing success and a realistic self-assessment of abilities (Goldfried & Robins, 1982; Lent et al, 1986).

Brooks (1988), in analyzing career development of young women according to Bandura's model, emphasized the lack of role models; higher levels of anxiety for women in choosing nontraditional, masculine sex-typed careers; and lack of

verbal persuasion (often verbal discouragement) for nontraditional career pursuits. She suggested interventions that include awareness of the factors that affect self-efficacy. One would approach a cognitive intervention using Bandura's theory by helping women to be aware of their competence to perform a task; by helping them to develop awareness of barriers and strategies to overcome environmental influences; and by recognizing the reciprocal relationship of behavior, affect, and cognitions.

Although locus of control research has found that females who are open to nontraditional careers have more internal locus of control and that control in general becomes more internal as adolescents grow older (Nowicki, 1973; Nowicki & Strickland, 1973), actual interventions with adolescents to influence locus of control are few. Only two studies investigating efforts to affect locus of control with adolescents were found (Omizo & Omizo, 1988; Simmons & Parsons, 1983). Both studies showed that locus of control was affected by the treatment, becoming more internal for working class girls and not for underclass girls (Simmons & Parsons, 1983) and for a small-group intervention (Omigo & Omigo, 1988).

From a review of the literature, therefore, intervention using Rotter's theory would require teaching women that their actions make a difference in their ability to control their reinforcers. A counseling intervention can help clients to

develop a generalized belief that they can be in control of their lives and help them develop beliefs in their self-efficacy in more specific tasks. Information about social influences and their relationship to internal barriers can be used.

Peer Facilitators

Peer counseling programs were developed to assist school guidance personnel (Shertzer & Stone, 1981). In 1984, the term "peer facilitator" was adopted officially by ASCA. A consensus developed that the term "facilitator" delimited a role and function of the student as a "helper," a more accurate, easily understood term for both parents and educators. A peer facilitator was defined (Myrick & Bowman, 1981) as a student who uses helping skills and concepts to assist other students, and sometimes adults, in thinking about ideas and feelings, in making responsible decisions, and in exploring alternatives to situations in four different roles: special assistant, tutor, special friend, and small-group leader (Myrick, 1993).

Selection of peer facilitators can be done in three ways: selection after a collection of data, selection of those best able to benefit from training, or self-selection (Frenza, 1985). Training, according to Myrick (1993), should include about 10-12 hours of information about the characteristics of a helping relationship, how to be a better listener, how to facilitate individuals to talk about their

ideas and feelings, how to use a problem-solving model, and some instruction in leading small groups.

Benefits of the use of peer facilitators include benefits to the facilitators, to staff, and to the group being served. Peer facilitator programs can free professionals for other duties, offering services enhanced by the unique abilities and skills of peer facilitators. Facilitators also have the opportunity for specialized training and the opportunity to help others, to gain special insight into the needs and problems of those being served, and for personal growth (Frenza, 1985).

Literature concerning the use of peer counselors for career development have been limited. Literature concerning models such as Thompson (1983), France (1984), and Project Women (Bureau of Adult, Vocational, and Technical Education, 1972) advocate use of peers, but with no empirical data evaluating their use. One study with high school students as small-group leaders showed modest gains over the control group for 16 peers (high school juniors) working with 122 ninth-grade, maladjusted, high-risk, potential dropouts and 101 regular students. Gains were shown in attendance and a measure of decisiveness (Schweisheimer & Walberg, 1976).

A college peer counseling program showed informally computed, positive gains in information about use of career development facilities as measured by a comparison of a pre- and postquestionnaire (Ash & Mandelbaum, 1982). A rare

experimental study compared a no-treatment control group to counselor and peer-led group assertiveness training. Peer-led and counselor-led treatments were shown to be equally effective on a measure of assertiveness. Subjects (48 eighth- and ninth-grade males) were also shown to be equally satisfied with peers or counselors as group facilitators (Huey & Rank, 1984).

Summary

In general, interventions can help young women become aware that career choice is not a passive process and that certain careers are no longer closed to them by society. Self-esteem, career self-efficacy, career locus of control, and global locus of control are internal factors in career development and career choice. Interacting with internal factors are environmental factors that contribute to perceptions and knowledge about accessibility of occupations, prestige of occupations, and stereotypes of sex roles and careers. In addition, conditions in the world of work are present that tend to limit perceptions of success for women entering an occupation.

Theorists have developed models for the nature of the interaction of the factors that affect career development. Knowledge of internal and external factors and of models of career development furnish insight into how to intervene in the lives of young women but do not give specific strategies. With intervention, knowledge gained about the factors

affecting success and strategies to overcome obstacles to success will allow young women more freedom in choosing careers and career training. Use of the developmental guidance model allows intervention within the school setting using adult leaders and peer facilitator leaders to enhance young women's efforts to achieve success.

The purpose of this study was to investigate the effects of a developmental guidance unit about career development for young women. More specifically, the study examined how the unit affected career self-efficacy, locus of control, career locus of control, self-esteem, and knowledge of the world of work. In addition, three group conditions for delivery of the unit were compared: adult helper-led, high school peer helper-led, and self-led groups.

CHAPTER 3
RESEARCH DESIGN, METHODOLOGY, AND PROCEDURES

The purpose of this study was to investigate the effects of a developmental guidance unit about career development on ninth-grade academically able female students. More specifically, the study examined how the unit affects self-esteem, locus of control, career self-efficacy, career locus of control, and information about the world of work. In addition, four group conditions related to the delivery of the unit were compared: adult helper-led, high school peer facilitator-led, self-led groups, and control groups. The population and sample, relevant variables, instruments, research design, hypotheses, participant training, the developmental guidance unit, procedures, data analyses, and methodological limitations are described in this chapter.

Population and Sample

The population for the study was ninth-grade academically able girls in Alachua County Public Schools, Gainesville, Florida. The sample was chosen from schools which agreed to participate in the study.

Population

Alachua County is located in north-central Florida, covers 965 square miles, has a population of 189,655 people,

and is considered a center for medical research, education, and agriculture. The largest employer in the area is the University of Florida (Chance, 1994).

The population for this study consisted of 1,200 ninth-grade students from six different high schools. The population of the county is racially integrated, at approximately 62% White and 34% African-American (see Table 3.1). The percentage of males to females is approximately even. The number of females by race in each high school may be seen in Table 3.1. The Alachua County school district also included 7 middle schools and 23 elementary schools.

It was estimated that approximately 300 ninth-grade girls in the county would score above the 50th percentile nationally in Total Reading and Total Math on the California Achievement Test (CAT). For the purposes of this study, this group was described as "academically able" and were considered eligible for the study.

Sample

All female ninth-grade students in Alachua County schools who scored above 50th percentile in Total Reading or Total Math on the eighth-grade California Achievement Test and who also had a 2.0 or better grade point average for their eighth-grade year were eligible to participate in the study. Two high schools agreed to participate.

Seventy-nine students at School #1 and 166 girls at School #2 were eligible to participate. One hundred two

Table 3.1

Population of Alachua County High Schools (by gender, race)

School	AF	AAF	HF	NF	WF
1	027	276	051	002	571
2	000	054	001	000	104
3	000	068	009	000	139
4	002	108	000	002	361
5	031	343	009	000	350
6	019	235	025	001	592

Note. Information provided by the School Board of Alachua County 12/07/94.

Legend.

1=Sante Fe High School-SF
2=Gainesville High School-GHS
3=Hawthorne High School-HHS
4=Newberry High School-NHS
5=Eastside High School-EHS
6=Buchholz High School-BHS

WF=White Females
AF=Asian-American Females
AAF=African-American Females
HF=Hispanic Females
NF=Native-American Females

girls returned necessary forms: 50 from School #1 and 52 from School #2. Of the 102 girls, 84 completed the study. Attrition can be attributed to failure to attend at least six of the eight sessions, not completing pre- or posttest, or inability to get permission to leave class.

Girls were assigned randomly to one of four groups representing the three experimental conditions of this study: peer-led [E_1], adult-led [E_2], self-led [E_3], and a control group (E_4) by the use of a table of random numbers.

School #1 was 45 girls, and School #2 was 39, for a total of 84 girls (see Table 3.2). Girls were pulled from academic and elective classes to receive the interventions. Data collection was conducted after obtaining research and participant approval from the Committee for the Protection of Human Subjects (University of Florida Institutional Review Board), Alachua County School Board Department of Research and Evaluation, school site principals, teachers, students, and students' parent(s) or legal guardian(s) (see Appendix A for Informed Parental Consent for Study Participation, Student Informed Consent, and Institutional Review Board Human Subjects Research Permission).

Table 3.2

Sampling of High School Students

Experimental Condition	School #1	School #2	Total
Peer-led (E_1)	11	10	21
Adult-led (E_2)	12	07	19
Self-led (E_3)	11	10	21
Control (E_4)	11	12	23
School Totals	49	39	84

Research Design

The hypotheses were tested based on the data derived from a randomized pretest-posttest control group

design (Campbell & Stanley, 1963), and the method is shown in Table 3.3. The pretest-posttest control group design is conventional and appropriate because of its research advantages. This design minimizes threats to internal validity such as history, maturation, testing, instrumentation, statistical regression, differential selection of subjects, experimental mortality, and interaction among factors (Mason & Bramble, 1989).

After data collection, hypotheses were tested using an analysis of variance (ANOVA). The ANOVA was used to test for time X group effects, significant differences between experimental and control groups, and significant differences in pretest to posttest data. The time X group interaction was the effect of primary interest, indicating a differential amount of change from pretest to posttest among the four groups.

Hypotheses

There were five dependent measures in this study: self-esteem, career self-efficacy, locus of control, career locus of control, and knowledge. An appropriate test of significance (confidence level of .05) was used to determine whether any measured differences were greater than those due to chance alone.

Table 3.3

Summary of Research Design

	Peer-Led (E_1)			
R	O_1, O_2, O_3, O_4, O_5	X_1	O_6, O_7, O_8, O_9, O_{10}	
	Adult-Led (E_2)			
R	O_1, O_2, O_3, O_4, O_5	X_2	O_6, O_7, O_8, O_9, O_{10}	
	Self-Led (E_3)			
R	O_1, O_2, O_3, O_4, O_5	X_3	O_6, O_7, O_8, O_9, O_{10}	
R	Control (E_4)			
	01, 02, O_3, O_4, O_5	X_4	O_6, O_7, O_8, O_9, O_{10}	

Key to design items.

R=Randomization of Students to Groups
O_1=Pre-test of the Texas Social Behavior Inventory
O_2=Pre-test of the CNSIE Control Scale
O_3=Pre-test of the Knowledge of the World of Work
O_4=Pre-test of the Career Locus of Control Scale
O_5=Pre-test of the Career Self-Efficacy Test
X_1=High School Peer Facilitator-Led Unit
X_2=Adult-Led Developmental Unit
X_3=Self-Led Developmental Unit
X_4=Control Group
O_6=Post-test of the Texas Social Behavior Inventory
O_7=Post-test of the CNSIE Control Scale
O_8=Post-test of the Knowledge of the World of Work
O_9=Post-test of the Career Locus of Control Scale
O_{10}=Post-test of the Career Self-Efficacy Test

The following five null hypotheses were tested:

Ho_1: There will be no statistically significant difference in self-esteem among the four experimental groups as measured by the Texas Social Behavior Inventory (TSBI).

Ho_2: There will be no statistically significant difference in career locus of control among the four experimental groups as measured by the Career Locus of Control Inventory.

Ho_3: There will be no statistically significant difference in locus of control as measured by the CNSIE control scale (1973) among the four experimental groups.

Ho_4: There will be no statistically significant difference in knowledge of the world of work among the four experimental groups, as measured by the Knowledge of the World of Work Questionnaire (KWWQ).

Ho_5: There will be no statistically significant difference in career self-efficacy among the four experimental groups, as measured by the Career Self-Efficacy Scale (CSES).

Relevant Variables

This section describes the independent and dependent variables. Five instruments were administered both pre- and postintervention by the researcher (see Appendix B): (a) the Children's Nowicki-Strickland Internal External control scale (CNSIE), (b) the Texas Social Behavior Inventory (TSBI), (c) the Career Self-efficacy measure developed by Hackett and Betz (1981) and modified by Post-Kammer and Smith (1985),

researcher-made instruments to measure (d) Career Locus of Control, and (e) Knowledge of the World of Work.

This study includes one independent variable, the developmental guidance unit or experimental intervention with three levels. The three levels of intervention were characteristic of the methods of leading the intervention, and include trained and supervised high school peer facilitators (peer-led), guidance counselors (adult-led), and students (self-led). A control group was also designated.

Independent Variable: The Guidance Unit

The developmental guidance unit about career development for teenage girls included eight sessions which focused on knowledge of the world of work, sex-role stereotypes, women heroes, being assertive, self-assessment, traditional and nontraditional careers, and career decision-making. The unit was outlined in a trainer/facilitator manual (see Appendix A); for an overview of this unit see Figure 3.1.

The peer-led units were facilitated by trained and supervised peer facilitators from the high school. The adult-led condition included guidance counselors from the participating high schools. Students in the self-led group read and responded to written materials created by the researcher about career development. The materials contained content comparable to the ideas presented in the peer-led and adult-led conditions. Students in the control group did not receive the guidance unit.

Developmental Guidance Unit: Career Development

FROM BABY DOLLS TO THE BOARDROOM

Session	Title	Objectives
1.	Sugar and Spice and Puppy Dog Tails	Identify realities behind sex role stereotyping in development.
2.	Gender Roles for Better or for Worse	Identify sources of stereotypes. Identify possible obstacles.
3.	Women in the World of Work	Identify results of sex role stereotyping in the world of work.
4.	Who Are the Heroines?	Identify females who have overcome obstacles. Identify characteristics necessary to overcome obstacles.
5.	The Pressures of Growing Up	Identify role of sex role stereotypes in present life. Identify obstacles resulting from sex role stereotypes.
6.	Being a Forceful Female	Identify assertive behaviors. Practice assertive behaviors.
7.	I am a Woman	Identify physical changes associated with female puberty. Identify social role changes associated with female puberty.
8.	Looking for Love in All the Right Places	Identify characteristics of developmentally appropriate relationships.
9.	Setting Your Sights for the Future	Prepare a self-assessment of abilities, interests, goals.
10.	Getting Ready for the Adventure Goals	Identify possible career. Identify steps in achieving goals.

Figure 1. Example of guidance unit.

The developmental guidance unit used in this study is entitled "From Baby Dolls to Boardrooms" and was initially piloted by Myrick (1993). The unit subsequently has been modified into 10 sections, designed to be delivered in sessions of about 30 to 40 minutes each. Each session has a title, specific objectives, structured learning activities with an outline of step-by-step procedures, suggested discussion questions and leads, and a closing statement (see Appendix A).

In general, the sessions were planned around preparing young women for options which include both traditional and nontraditional career preparation and career choices. The sessions began by introducing the girls to social expectations for females, sex-role stereotyping, and its implications for women in the world of work. The girls were then asked to talk about women whom they admire. The girls discussed social and personal pressures adolescent girls face. This led to a session which helped the group think about personal power and being a female who is assertive and unafraid to accept responsibility. The session following attended to some primary issues women face and how relationships influence career choices and plans. Finally, the group members were encouraged to take part in self-assessment activities, including clarification of some possible career opportunities. They also learned some basic concepts about career planning and identified the next steps

to reach their career goals. Consideration of cultural differences were also explored.

The unit and its sessions were designed so they might be led by an adult, perhaps a teacher or a counselor, or by a peer facilitator, perhaps an older 11th- or 12th-grade student who has received training in a peer facilitator program. The self-led unit was adjusted to remove the group activities and focused primarily on posing thoughtful questions, imagery, and personal reflection, including journaling. The manual with activities was designed to control for variation in leadership by including step-by-step, explicit directions, prompts, and discussion questions to be read by the leader.

Leader Training

The training procedures for use with high school peer facilitators and adult facilitators to aid in the deliverance of the guidance unit is described in this section. Each group facilitator received a facilitator's manual (see Appendix A) for the guidance unit on career development and met with the principal investigator for training. Group facilitator training consisted of a 90-minute workshop before the sessions began.

Adult-Led

Adult facilitators consisted of a school counselor at each site. The counselors were certified by the State of Florida and hold at least a master's degree in guidance and

counseling. The principal investigator talked with the adults at each site on a weekly basis to discuss and review the progress of the previous sessions and the research procedures.

Peer-Led

This study also used peer facilitators from high schools in Gainesville, Florida. The training of the high school peer facilitators consisted of a one-semester class with a curriculum including knowledge of facilitative listening and reflecting feelings.

To prepare the peer facilitators for leading the guidance unit, the principal investigator reviewed the facilitator's manual with peer facilitator trainers. The trainers reviewed the unit and activities with their peer facilitators before they met with the ninth-grade girls in this study. The trainers helped the peer facilitators practice facilitating the unit sessions using role-playing and discussion. Weekly follow-up sessions were conducted by the adult leaders with the peers to discuss sessions, difficulties, progress, and questions.

Self-Led and Control

The self-led group was given written materials weekly. The materials were similar to the adult-led and peer-led but did not include the oral directions nor the group activities. The control group attended the classes according to their regular schedule.

Dependent Variables: The Instruments

This investigation focused on five relevant, dependent variables: Knowledge of the World of Work (KWWQ), Career Self-Efficacy (CSES), Locus of Control (CNSIE), Career Locus of Control (CLCI), and Self-Esteem (TSBI). Each of the variables was measured by an appropriate instrument. The present study used five criterion measures (see Appendix C). The Texas Social Behavior Inventory (TSBI) measured social self-esteem. The Children's Nowicki-Strickland Internal External control scale (CNSIE) was used to measure global locus of control. The career self-efficacy measure developed by Hackett and Betz (1981) and modified by Post-Kammer and Smith (1985) measured efficacy expectations and interest for traditional and nontraditional and math and nonmath careers. Researcher-made instruments to measure Career Locus of Control and Knowledge of the World of Work were used to measure career locus of control and knowledge variables. All instruments were self-reported.

Texas Social Behavior Inventory

Self-esteem was identified as a relevant and important variable in career development. The AAUW study (1992) as well as other studies reported a drop for adolescent girls in self-esteem, achievement, and failure to enroll in math and science courses. Social and cultural conditioning, sex-role stereotypes, peer and parent influence, and other social factors were suggested as possible sources of influence.

Because the researcher desired to focus the developmental guidance unit on issues tied to young women and their learned, and therefore changeable, behaviors and attitudes related to career development, an instrument that measured self-esteem in the social domain appeared appropriate. In choosing an instrument to measure self-esteem, the definition and the domain(s) of focus of the authors as well as the psychometric properties of the instrument were considered.

Self-esteem as studied by various researchers has been difficult to define. A global definition is "one's evaluation of oneself." However, research indicates alternatives other than global self-esteem may be relevant.

Some authors have differentiated global self-esteem (unidimensional) from self-esteem specific to various domains (multidimensional) (Li, 1988) and reference group self-esteem from personal self-esteem (Harter, 1990). The multidimensional approach would assess the specific domains of competence such as academic, social, and physical selves. For example, a person may hold a positive academic self-concept but a less favorable social self-concept (Li, 1988). The reference group approach acknowledges that, for example, school grades may influence self-esteem more for one reference group than another (Harter, 1990). An example of the reference group concept would be the AAUW finding that African-American girls have higher self-esteem for appearance

and yet score lower for academic self-esteem than white girls (AAUW, 1992).

Interpretation of findings from research studies concerned with self-esteem have been criticized because of biases related to issues addressed in the present study. In a review of literature, one author (Markstrom-Adams, 1989) noted that high masculinity and high self-esteem are often found to be positively correlated.

Markstrom-Adams (1989) suggested that measures of psychosocial well-being examined in relation to masculinity and femininity may be inherently sex-role linked. For instance, the reason masculinity and the masculine component of androgyny are found to be related to greater psychosocial well-being may be that the constructs typically studied in relation to sex-role
orientation have been reflective of stereotypical masculine traits. She found in the literature such correlates as mastery of the external world, vocational identity, ideological identity, physical competence, achievement motivation, computer arcade playing, and sports participation. Likewise, femininity has been linked to stereotypical feminine traits: social relations, interpersonal identity, and lower levels of arcade playing (Markstrom-Adams, 1989).

According to Markstrom-Adams (1989) measures of self-esteem have shown masculinity (high masculine scores) linked

more with self-esteem and other psychosocial well-being traits than high feminine scores or androgyny. The author expressed concern that assumptions have been made that androgyny is the most desirable sex-role orientation and encouraged development of use of otherwise stereotypical masculine/feminine traits situationally. She also suggested that indicators of psychosocial well-being be examined for sex-role linkage.

The Texas Social Behavior Inventory (TSBI) is a measure of self-esteem that has been tested for and appears to be relatively free of gender stereotyping and sex-role linked items. The TSBI has been found in at least one study to be relatively free from sex-role stereotypes. In a study using the Texas Social Behavior Inventory (Spence, Helmreich, & Stapp, 1975) to measure social self-esteem, there were no significant correlations between the TSBI and stereotype ratings.

Highly significant, positive correlations between masculinity and self-esteem were found in both sexes, while significant, positive correlations between femininity and self-esteem were also found on the TSBI for both sexes. The association between the male-valued scale and self-esteem were particularly strong for both sexes($r = .77$ and $.83$ for males and females, respectively). The authors noted that implicit in the masculine/feminine dichotomy is the assumption that each contributes to social and personal

effectiveness, hence, androgyny, a high degree of both characteristics, being the most desirable.

The Texas Social Behavior Inventory (TSBI) was determined as an appropriate and sufficient instrument for determining actual change in social self-esteem as affected by the developmental guidance unit. The TSBI was developed to categorize individuals as a function of their social competence. Factor analyses by the authors produced one large factor and four conceptually correlated factors: confidence, dominance, social competence, and social withdrawal/relation to authority figures (Helmreich, Stapp, & Ervin, 1974).

The Texas Social Behavior Inventory (TSBI) is a multiple choice scale designed to assess the individual's perceptions of social competence and self-esteem. There are five response choices. Each item is given scores ranging from 0 to 4, with 0 defining the response associated with low social competence and 4 the response associated with high self-esteem. Because statements may describe behaviors associated with either high or low social competence, whether the response "*Not at all characteristic*" or "*Very much characteristic*" was scored as 4 varied. The total score for each individual is the sum of all items (Helmreich et al., 1974).

Validity of the TSBI has been established through factor analysis of an administration to 1,000 college students in

1969. The original 60 items were reduced to 32. In other studies, reports of low positive correlations (.40 or less) with other measures of self-esteem are contrasted with a correlation of .76 with a subtest of performance self-esteem on the Ghiselli Self-Assurance Scale (McIntire & Levine, 1984) and a low, positive, and significant correlation with internal locus of control (R^2 = .089, $p < .001$) (Sadowsky, Woodward, Davis, & Elsbury, 1983).

In regard to discriminant validity, Helmreich et al. (1974) found no relationship between the TSBI and intelligence, as measured by the Scholastic Aptitude test, although it was found to be predictive of academic and other honors. The TSBI has shown only nonsignificant correlations with standard measures of intelligence or achievement. A modest relationship has been found between social desirability for females and the TSBI measure of social competence for college students (Helmreich et al., 1974). An analysis of variance for the high school population yielded no significant differences on the TSBI for four social classes (Upper, Upper Middle, Lower Middle, and Lower) (Spence & Helmreich, 1978).

The sample population for the original studies by Spence and Helmreich included a range of constituencies: high school juniors and seniors in five New England public schools tested during the 1974-1975 academic year (blue collar, Italian Catholic middle to upper middle class, and Protestant

middle class students). Two other schools were tested during the 1975-1976 academic year, both middle class students. The largest sample group was 1,769 (756 males and 1,013 females) and the smallest subsample was 963 students (374 males and 589 females). The sample population included 97% who identified themselves as White, and over 90% of the students came from intact homes. The mean for males on the TSBI was 38.76; for females, 38.76; SD for males was 8.56, for females, 9.07 (Spence & Helmreich, 1978).

Reliabilities for the TSBI have been reported of .89 (alternate-form) (Helmreich et al., 1974) and a Cronbach's Alpha of .92 (McIntire & Levine, 1984).

Career Locus of Control

Using the Career Locus of Control scale (CNSIE) as a model, items believed related to career development and planning for young women were generated. Items were edited and revised after perusal by the principal researcher, professors in the Department of Counselor Education, and female high and middle school students. Examples of items include the following: "In a job interview, appearance is more important than job skills"; "my parents will support me whatever my career choice might be." "Boys that I know as friends will support me in my career choice." "Men have the advantage in jobs even though women keep trying."

Items are scored on a Likert-type scale of 1-5 and differ as to whether a high score on each item is external or

internal. Scores were reversed before data analysis was conducted. A high score overall is more external. A low score is more internal.

The Children's Nowicki-Strickland Internal-External Scale

Locus of control was identified as a relevant and important variable in career development. The AAUW study (1992) as well as other studies reported a drop for adolescent girls in self-esteem, achievement, and failure to enroll in math and science courses. Social and cultural conditioning, sex-role stereotypes, peer and parent influence, and other external factors were suggested as possible sources of influence. Girls' beliefs about their own power to determine their choices and control outcomes as compared to their reliance on outside forces, luck, or other people were logically connected. The Children's Nowicki-Strickland Internal-External scale (CNSIE) was determined to be an appropriate and sufficient instrument for measuring change in locus of control as affected by the developmental guidance unit.

The Nowicki-Strickland Locus of Control Scale was originally developed to assess the construct of locus of control of reinforcement. Rotter (1972) defined locus of control of reinforcement as the perception of a connection between one's actions and its consequences, developing over

time as an abstraction of the accumulation of specific encounters.

Although other instruments for particular goal areas (for example, achievement, health, and marital satisfaction) have been developed, the CNSIE was developed assuming a relatively stable, generalizable personality characteristic, with about one-third of the items having been accounted for by a general factor characterized as general helplessness (Lefcourt, 1991). In 1969, Nowicki and Strickland constructed and published the Children's Nowicki-Strickland Internal-External control scale (1973), the only instrument of its kind for children from ages 9 to 18 years.

Administration of the scale usually takes from 10 to 15 minutes. The pencil-and-paper scale consists of 40 questions answered yes or no. The score is the total number of items answered in an externally controlled direction. The higher the score, the more external the locus of control.

Content validity was established by consultation with teachers and psychologists. It was then given to a sample of children ranging from the third to the ninth grades. An item analysis as well as comments from teachers and pupils in the sample led to the present form of the instrument consisting of 40 items (Nowicki & Strickland, 1973).

Reliability estimates were established by a number of studies. Test-retest reliability 6 weeks apart was .66 for 7th graders (n = 117) and .71 for 10th graders (n = 125) and

.75 for those in the 12- to 15-year-old group (n = 54), the age group being studied in the present research study. Internal consistency computed by the split-half method (1,017 students), corrected by Spearman-Brown, were r = .74 for combined grades 9, 10, and 11. Other reports of internal consistency for high school students (n = 379) were deemed adequate by the authors (Nowicki & Strickland, 1973). The figures were similar for 12th graders, who showed a test-retest reliability of .76 over 5 weeks (Nowicki & Roundtree, 1976).

Efforts to establish discriminant validity for the NSCIE focused on the factors of intelligence and social desirability. Minimizing social desirability was a goal for the authors of the locus of control scale for children. Nonsignificant correlations between locus of control scores and social desirability were reported for subjects in grades 3 through 12. Intelligence was another variable that should not be related to locus of control scores. Nonsignificant correlations between the CNSIE scores and IQ scores were reported by Nowicki and Strickland (1973) and Nowicki and Roundtree (1976).

Studies to establish convergent reliability with other locus of control measures, gender, age and achievement test scores have been conducted (Nowicki, 1973, 1976). Sex of the subject did not relate to internality and externality scores. The mean scores of males and females was essentially the same

at equivalent age levels. The variables of sex, race, intelligence, and social desirability have been shown to have no confounding effect on CNSIE scores (Nowicki, 1973; Nowicki & Strickland, 1973).

Researchers have revealed constructs which correlate with locus of control in a theoretically consistent manner. Correlates include social class (higher is more internal), and race (more external with age for African Americans, as contrasted to Whites, who are more internal with age). However, social class and race are difficult to separate, according to the authors (Nowicki & Strickland, 1973).

Knowledge of the World of Work

Knowledge of the world of work is related to cognitions, of career choices (Astin, 1985; Bem, 1981), cognitive maps and opportunities (Gottfredson, 1981), locus of control (Harris, 1981, Simmons & Parsons, 1983), self-efficacy (Lent & Hackett, 1987), and self-esteem (Hughes, Martinek, & Fitzgerald, 1985; Korman, 1967). Knowledge of sex-role stereotypes and obstacles to success are also important in exploring a wide range of careers and being successful in a career and in career preparation. A researcher-developed 15-item questionnaire was used to assess knowledge of the world of work in several areas: career decision-making, gender stereotypes, obstacles to success, and career opportunities. Scores were calculated based on the number of items correctly

answered. Possible scores ranged from high score of 15 to a low score of 0. A high score indicated more knowledge.

Career Self-Efficacy Scale

Career self-efficacy was measured by an adaptation of an instrument developed by Hackett and Betz (1981) in which subjects responded to 10 traditional and 10 nontraditional occupations and a Confidence Scale indicated on a Likert-type scale (1-10). An adaptation by Post-Kammer and Smith (1985) added four occupations in order to have an equal number of math-related and non-math-related career items. The items asked whether the subjects felt they were able to complete successfully (a) the education or training requirements for each occupation and (b) the job duties of each occupation, and (c) whether they were interested in that career. Possibilities for scores ranged from a high of 120 to a low of 12. The higher the score, the more self-efficacy for job tasks or education requirements was indicated.

Research Procedures

The researcher conducted a review of professional literature to ascertain the relevant variables and precedents in previous research studies. After securing permission from the School Board of Alachua County and the University of Florida, the trainer manual was developed. After meeting with adult and peer leaders, the process of training, selecting, and pulling participants from classes, times for

contact with the leaders, and delivering materials were determined.

The study began in October, 1995, continuing for approximately 8 weeks of the school year, approximately one grading period, and was completed in December, 1995. The materials required individuals to read, comprehend, and respond (see Table 3.4). A statistical test of significance was used to determine whether the observed relationships were likely to have arisen by chance (Shavelson, 1988).

Table 3.4

Summary of Procedures and Time Table

Week	Procedures
1	Selection process: students, adult-led, peer-led group leaders
	Leader training
	Call for subjects, obtain permission and informed consent
	Random assignment to groups
2	Week 1-Organize treatment groups in schools
	Administer pretests
2	Conduct sessions 1-10 of *From Baby Dolls to Boardrooms:*
	Week 2-Session 1 Week 3-Session 2 Week 4-Session 3 Week 5-Session 4 Week 6-Session 5 Week 7-Session 6 & 7 Week 8-Session 8 & 9 Week 9-Session 9 & 10
	Meet weekly with group leaders
8	Week 9-Administer post-tests
9	Posttreatment:
	Data collection and analysis
	Report to group leaders, IRB, subjects

CHAPTER 4
RESEARCH FINDINGS

The purpose of this study was to investigate the effects of a developmental guidance unit about career development on ninth-grade academically able female students. More specifically, the study examined how the unit affects self-esteem, locus of control, career self-efficacy, career locus of control, and information about the world of work. In addition, four group conditions related to the delivery of the unit were compared: adult-helper-led, high-school peer facilitator-led, self-led groups, and control groups.

In this chapter the research findings are presented. Reliability coefficients that were calculated using data from the present study are reported. Finally, outcome testing of this study's research hypotheses are discussed. Data were collected on 84 students from two high schools in Gainesville, Florida. Five separate repeated measures analyses of variance were conducted, one for each of the five variables related to the hypotheses. The experimental and control groups were examined on the following variables: locus of control, career locus of control, social self-esteem, self-efficacy, and knowledge of the world of work.

Each hypothesis was tested at the .05 level of confidence and used the F score and accompanying p value.

Social Self-Esteem

Self-esteem is a person's evaluation of oneself as an individual. For the present study, the Texas Social Behavior Inventory was used, composed of 32 Likert-type items assessing the individual's perception of her social competence and self-esteem. There were five response choices, ranging from 1 to 5, with 1 defining the response associated with low feelings of social competence and 5 defining the response associated with high social. The highest score possible was 128, and the lowest score was 32.

It is noted that the core sample mean for high school students in the original norming sample varied from the mean for the present study. The mean for males on the original TSBI was 38.76; for females, 38.76 (Spence & Helmreich, 1978). Means for the present sample of academically able ninth-grade girls, correcting for differences on the answer sheet, ranged from 86.29 for the pretest for the self-led group to 92.80 for the posttest for the peer-led group (see Table 4.1), a difference of about 50 points compared to the original norming group.

Ho_1: There will be no statistically significant difference in self-esteem among the four experimental groups, as measured by the Texas Social Behavior Inventory (TSBI).

Table 4.1

Group Mean Scores

VARIABLE	ADULT-LED_ N	X	SD	PEER-LED_ N	X	SD	SELF-LED_ N	X	SD	CONTROL _ N	X	SD
TSBI												
Pre	16	121.12	18.45	19	119.74	20.45	21	118.29	15.56	22	122.41	16.46
Post	19	120.17	18.28	20	124.80	18.07	20	118.95	18.92	23	122.35	16.80
Difference			-0.95			+5.06			+0.66			+0.06
CSES												
PreTrad	19	22.37	6.11	20	22.75	7.24	21	24.43	4.20	22	25.91	6.35
PostTrad	19	23.53	6.66	21	24.45	6.58	21	24.86	4.09	23	23.09	5.63
Difference			+1.16			+1.73			+0.43			-2.82
PreNontrad	18	28.39	6.84	21	28.24	8.02	20	30.35	5.23	23	31.43	6.75
PostNontrad	19	29.95	6.42	21	29.33	5.89	21	31.00	5.25	23	29.39	5.24
Difference			+1.56			+.09			+0.65			-2.04
PreMath	18	23.89	7.00	20	24.30	7.36	21	26.24	4.66	22	27.55	7.29
PostMath	19	26.05	7.07	21	25.67	6.44	21	26.90	5.81	23	25.22	5.92
Difference			+2.16			+1.37			+0.66			-2.33
PreNonmath	19	27.00	6.71	21	26.81	8.42	20	28.60	4.78	22	29.59	5.74
PostNonmath	19	27.42	6.45	21	28.14	6.37	21	28.95	4.06	23	27.26	5.58
Difference			+0.42			+1.33			+0.35			-2.33

Table 4.1--continued.

VARIABLE	ADULT-LED_			PEER-LED_			SELF-LED_			CONTROL _		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
PreInterest	18	50.39	11.93	20	50.65	14.89	20	55.00	8.40	22	57.14	12.48
PostInterest	19	53.47	12.48	21	53.81	11.77	21	55.86	8.74	23	52.48	10.25
Difference			+3.08			+3.16			+0.86			-4.66
PreEducation	19	103.26	58.14	19	122.37	57.66	20	103.55	50.88	20	117.80	52.26
PostEducation	18	122.50	59.02	21	168.33	45.69	21	106.90	49.51	22	123.09	51.55
Difference			+19.24			+45.96			+3.35			+5.29
PreJob	18	116.61	56.68	20	143.90	52.00	18	115.22	50.76	21	129.00	58.85
PostJob	17	114.06	57.00	19	166.37	44.47	21	117.38	41.88	23	124.91	54.26
Difference			-2.55			+22.47			-2.16			-4.09
Knowledge of W.W.												
Pre	19	8.00	3.51	21	9.57	2.52	21	8.43	2.98	23	9.26	2.28
Post	19	9.00	3.38	21	11.05	3.02	21	9.05	3.15	23	9.52	2.45
Difference			+1.00			+1.48			+0.62			-0.26
CNSIE												
Pre	18	58.83	5.75	20	59.45	4.12	20	57.70	4.12	22	60.36	4.14
Post	19	60.00	5.39	21	59.62	3.47	20	58.30	2.64	22	60.55	3.89
Difference			+1.12			+0.17			+0.60			-0.19

Table 4.1--continued.

VARIABLE	ADULT-LED_ N	X	SD	PEER-LED_ N	X	SD	SELF-LED_ N	X	SD	CONTROL _ N	X	SD
Career Locus of Control												
Pre	18	54.28	2.95	17	54.47	2.96	20	53.60	2.48	23	54.04	2.90
Post	19	54.74	2.28	21	54.52	3.46	21	53.10	2.26	23	53.22	3.72
Difference			+0.46			-0.05			-0.5			-0.82

As illustrated in Table 4.1, group means varied less than 1 point throughout, with the exception of the peer-led group. Students in the control group achieved a group mean score of 122.41 on the pretest (SD=16.46) and 122.35 (SD=16.80) on the posttest. Students in the adult-led group achieved a group mean score of 121.12 on the pretest (SD=18.45) and 120.17 on the posttest (SD=18.28). Students in the peer-led group achieved a group mean score of 119.74 on the pretest (SD=20.45) and 124.80 (SD=18.07) on the posttest. Students in the self-led group achieved a group mean score of 118.29 (SD=15.56) on the pretest and 118.95 (SD=18.92)on the posttest.

An examination of the pre- and posttest and group sources of variance resulting from the repeated measures ANOVA (see Table 4.2) revealed a p value of 0.33 and an F value of 1.18. These figures suggest that there was no statistically significant time X group interaction at the .05 level of confidence. Therefore, the null hypothesis relating to differential change in social self-esteem among the groups was not rejected.

Career Locus of Control

Locus of control about one's career concerns feelings about control over events related to career choice and career decision-making. It is defined by the researcher as beliefs about success in career preparation and choice perceived as controlled by the individual (internal) or not controlled by

Table 4.2

Summary Table for Analysis of Variance for the TSBI Scale by Group (N=82)

Source of Variance	df	SS	Mean Square	F	P
Group	3	382.98	127.66	0.23	0.88
School	1	27.79	27.79	0.05	0.83
Group*School	3	2164.69	721.56	1.27	0.29
Error	67	37927.71	566.08		
Time (Pre-Post)	1	176.84	176.84	2.12	0.15
Time*Group	3	294.30	98.10	1.18	0.33
Time*School	1	182.94	182.94	2.19	0.14
Time*Group*School	3	186.89	186.89	0.75	0.53
Error	67	5586.86	83.39		

the individual (external). Control may be attributed to peers, more powerful others, or an outside force. Examples of items on the researcher-developed instrument included the following: "In a job interview, appearance is more important than job skills. My parents will support me whatever my career choice might be. Boys that I know as friends will support me in my career choice. Men have the advantage in jobs even though women keep trying."

The 32 items were scored on a Likert-type scale of 1-5. A high score overall indicated more external control. A low score indicated more internal control. The maximum score possible was 160; the minimum score possible was 32. An internal consistency estimate on data (84 students) from the

present study yielded a Cronbach's Alpha of .56. A test-retest (10 days, 57 students) estimate of reliability on a separate group yielded a reliability coefficient of .63.

Ho_3: There will be no statistically significant difference in career locus of control as measured by the Career Locus of Control Inventory among the four experimental groups.

As illustrated in Table 4.1, group means throughout varied less than a point. Students in the control group achieved a group mean score of 54.04 (SD=2.90) on the pretest and 53.22 (SD=3.72) on the posttest. Students in the adult-led group achieved a group mean score of 54.28 on the pretest (SD=2.95) and 54.74 (SD=2.28) on the posttest. Students in the peer-led group achieved 54.47 on the pretest (SD= 2.96) and 54.42 on the posttest (SD=3.46). Students in the self-led group achieved 53.60 (SD=2.48) on the pretest and 53.10 (SD=2.26) on the posttest.

An examination of the pre- and posttest sources of variance and F (0.84) and p (0.48) values (Table 4.3) suggested that there was not a statistically significant time X group interaction at the .05 level of confidence. Therefore, the null hypothesis relating differential change in career locus of control among the groups was not rejected.

Table 4.3

Summary Table for Analysis of Variance for the Career Locus of Control Inventory (CLCS) by Group (N=82)

Source of Variance	df	SS	Mean Square	F	P
Group	3	33.87	11.29	0.82	0.49
School	1	0.04	0.04	0.00	0.96
Group*School	3	15.76	5.25	0.38	0.77
Error	70	964.20	13.77		
Time (Pre-Post)	1	0.85	0.85	0.21	0.65
Time*Group	3	10.40	3.47	0.84	0.48
Time*School	1	0.05	0.05	0.01	0.91
Time*Group*School	3	5.15	1.72	0.42	0.74
Error	70	289.60	4.14		

Locus of Control

Locus of control is defined as feelings about having control of events in one's life or taking responsibility for one's life. Internals believe that events occur primarily as a result of their own behavior, while externals see events following their behavior as primarily determined by outside forces (e.g., luck, chance, powerful others, environment). The Nowicki-Strickland Scale was constructed across interpersonal and motivational areas such as affiliation, achievement, and dependency.

An internal consistency estimate using the data from the present study yielded a Cronbach's Alpha of .56, although reported measures of internal consistency from the literature

have been higher. In earlier research, reliability ranged from .74 for combined grades 9, 10, and 11 to .66 for 7th graders, .71 for 10th graders (Nowicki & Strickland, 1973), and .76 for 12th graders (Nowicki & Roundtree, 1976).

Ho_3: There will be no statistically significant difference in locus of control as measured by the CNSIE control scale (1973) among the four experimental groups.

As illustrated in Table 4.1, none of the group means differed more than 1.17 points. Students in the control group achieved a group mean pretest score of 60.36 (SD=4.14) and a posttest group mean of 60.55 (SD=3.89). Students in the adult-led group achieved a group pretest mean of 58.83 (SD=5.75) and a posttest group mean of 60.00 (SD=5.39). The peer-led group achieved a group mean of 59.45 (SD=4.12) on the pretest and 59.62 (SD=3.47) on the posttest. The self-led group achieved a group mean of 57.70 on the posttest (SD=4.12) and 58.30 (SD=2.64) on the posttest.

The repeated measures ANOVA of these data is reported in Table 4.4. The p value (0.89) and the F value (0.21) suggest that there was not a statistically significant time X group interaction at the .05 level of confidence. Therefore, the null hypothesis relating differential change in locus of control was not rejected.

Table 4.4

Summary Table for Analysis of Variance for the CNSIE Scale by Group (N=78)

Source of Variance	df	SS	Mean Square	F	P
Group	3	133.32	44.44	1.64	0.19
School	1	15.40	15.40	0.57	0.45
Group*School	3	175.45	58.48	2.16	0.10
Error	70	1894.12	27.06		
Time (Pre-Post)	1	4.52	4.52	0.57	0.45
Time*Group	3	5.09	1.70	0.21	0.89
Time*School	1	0.94	0.94	0.12	0.73
Time*Group*School	3	3.77	1.26	0.16	0.92
Error	70	553.48	7.91		

Knowledge of the World of Work

Knowledge of the world of work is a construct defined as knowledge of information about career decision-making, gender stereotypes, obstacles to success, and career opportunities. Knowledge of the world of work has been related to cognitions about career choices (Astin, 1985), cognitive maps and opportunities (Gottfredson, 1981), locus of control (Harris, 1981, Simmons & Parsons, 1983), self-efficacy (Lent & Hackett, 1987), and self-esteem (Hughes, Martinek, & Fitzgerald, 1985; Korman, 1967).

Knowledge of sex-role stereotypes and obstacles to success are thought to be important in exploring a wide range of careers and being successful in a career and in career

preparation. A researcher-developed 15-item questionnaire was used to assess knowledge of the world of work in several areas: career decision-making, gender stereotypes, obstacles to success, and career opportunities. Scores were calculated based on the number of items correctly answered. Possible scores ranged from high score of 15 to a low score of 0. A high score indicated more knowledge. An internal consistency estimate using the data from the present study yielded a Cronbach's Alpha of 0.47. A test-retest estimate of reliability on a separate group (10 days, 57 students) yielded a reliability of .70.

Ho_4: There will be no statistically significant difference in Knowledge of the world of work, as measured by the Knowledge of the World of Work Questionnaire (KWWQ) among the four experimental groups.

As illustrated in Table 4.1, none of the groups differed more than 1.08 points from pretest to posttest. Students in the control group achieved a group mean score of 9.26 (SD=2.28) on the pretest and 9.52 (SD=2.45) on the posttest of the KWWQ. Students in the adult-led group achieved a mean score of 8.00 (SD=3.51) on the pretest and 9.00 (SD=3.38) on the posttest. Students in the peer-led group achieved a group mean score of 9.57 (SD=2.52) on the pretest and 11.05 (SD=3.02) on the posttest. Students in the self-led group

achieved a group mean score of 8.43 (SD=2.98) on the pretest and 9.05 (SD=3.15) on the posttest.

As can be seen in Table 4.5, a repeated measures analysis of variance for the KWWQ by group suggests that there was a significant difference in a positive direction in all groups combined, comparing pre- and posttest scores (F score of 8.27 and a p value of 0.01), but no significant difference for Time X Group. Therefore, the null hypothesis relating to differential change in knowledge of the world of work among the groups was not rejected.

Table 4.5

Summary Table for Analysis of Variance for the Knowledge of the World of Work Questionnaire (KWWQ) by Group (N=84)

Source of Variance	df	SS	Mean Square	F	P
Group	3	75.84	25.28	2.06	0.11
School	1	89.93	89.93	7.31	0.00*
Group*School	3	16.09	5.36	0.44	0.73
Error	76	934.85	12.30		
Time (Pre-Post)	1	32.50	32.50	8.27	0.01*
Time*Group	3	9.95	3.36	0.84	0.47
Time*School	1	0.12	0.12	0.03	0.86
Time*Group*School	3	18.19	6.06	1.54	0.21
Error	76	298.72	3.93		

* Statistically significant at the .05 level.

Self-Efficacy

Self-efficacy is an expectancy for success at a task on which success is perceived to be dependent on ability (Bandura, 1989; Kirsch, 1986). Professional literature has included attempts at specifying particular tasks which lead to an outcome. Thus, career self-efficacy is expectancy for success at completing the required training and performing the job task for a specific occupation. Self-efficacy expectations can also be measured for education requirements for specific careers.

For the purpose of this study, self-efficacy concerns were focused on interest, job tasks, and educational requirements. Subsets of data for math and nonmath careers, traditional and nontraditional careers were examined.

Career self-efficacy in the present study was measured by an adaptation of instruments developed by Betz and Hackett (1991) and Post-Kammer and Smith (1985). Subjects responded to 10 traditional and 10 nontraditional occupations plus an added four occupations yielding an equal number of math-related and non-math-related career items, for a total of 24 occupations. Subjects indicated the degree to which they felt they were able to complete successfully (a) the education or training requirements for each occupation, (b) the job duties of each occupation, and (c) whether they were interested in that career. The responses were analyzed by

traditional and nontraditional as well as math-related and non-math-related career responses.

A Likert-type range of 10 responses was used. The highest possible score for interest or for all careers was 72, the lowest 24. The highest possible score for self-efficacy for job tasks and educational requirements combined and divided into subsets for traditional, nontraditional, math, or nonmath was 216, the lowest possible was 0. A higher score was associated with higher interest or self-efficacy.

Traditional and Nontraditional

Self-efficacy for traditional and nontraditional career job tasks and educational requirements can be seen in Table 4.1. With the exception of the control group, all groups increased their scores on self-efficacy for traditional careers. For self-efficacy for traditional careers, students in the adult-led group scored 22.37 (SD=6.11) on the pretest and 23.53 (SD=6.66) on the posttest, an increase of 1.16 points. The peer helper-led group increased from 22.75 (SD=7.24) to 24.45 (SD=6.58), an increase of 1.73 points. The self-led group increased from 24.43 (SD=4.20) to 24.86 (SD=4.09), an increase of 0.43 points. The control group decreased from 25.91 (SD=6.35) to 23.09 (SD=5.63), a difference of 2.82 points.

The repeated measures analysis of variance for traditional careers is summarized in Table 4.6. Upon

examining the variances and the F score (2.67) and p value (0.05), there was a statistically significant time X group interaction at the .05 level.

A post hoc analysis using Tukey's Studentized Range yielded no significant differences between groups (Alpha=0.05, df=74, and MSE=35.68; Critical Value=3.72). Therefore, the null hypothesis relating to differential change among the groups was not rejected.

Table 4.6

Summary Table for Analysis of Variance for the Career Self-Efficacy Scale(Traditional)by Group (N=84)

Source of Variance	df	SS	Mean Square	F	P
Group	3	69.06	23.02	0.39	0.76
School	1	1.08	1.08	0.02	0.89
Group*School	3	63.53	21.18	0.36	0.78
Error	74	4366.02	59.00		
Time (Pre-Post)	1	0.33	0.33	0.02	0.88
Time*Group	3	118.61	39.54	2.67	0.05*
Time*School	1	25.42	25.42	1.72	0.19
Time*Group*School	13	9.33	3.110.21		0.89
Error	74	1095.58	14.81		

* Statistically significant at the .05 level.

Self-efficacy for nontraditional career job tasks and educational requirements combined can be seen in Table 4.1.

With the exception of the control group, all groups slightly increased their scores on the measure of self-

efficacy for nontraditional careers. For self-efficacy for nontraditional careers, students in the adult-led group increased from 28.39 points (SD=6.84) on the pretest to 29.95 points (SD=6.42) on the posttest, a difference of 1.56 points.

The peer helper-led group increased from 28.24 (SD=8.02) on the pretest to 29.33 (SD=5.89) on the posttest, an increase of 1.09 points. The self-led group increased from 30.35 (SD=5.23) on the pretest to 31.00 (SD=5.25) on the posttest, an increase of 0.65 points. The control group decreased from 31.43 (SD=5.24) on the pretest to 29.39 on the posttest, a decrease of 2.04 points.

The repeated measures analysis of variance is summarized in Table 4.7. An examination of the data (F score of 1.48 and a p value of 0.23) suggests that there was no statistically significant time X group interaction at the .05 level.

Math and Nonmath Careers

Self-efficacy for job tasks and educational requirements combined for math and nonmath careers can be seen in Table 4.1. For self-efficacy for nonmath careers, students in the control group decreased 2.33 points from a pretest score of 29.59 (SD=5.74) to a posttest score of 27.26 (SD=5.58). The mean group score for students in the adult-led group increased from 27.00 (SD=6.71) on the pretest to 27.42 (6.45) on the posttest.

Table 4.7

Summary Table for Analysis of Variance for the Career Self-Efficacy Scale(Nontraditional) by Group (N=82)

Source of Variance	df	SS	Mean Square	F	P
Group	3	90.80	30.27	0.48	0.70
School	1	41.18	41.18	0.65	0.42
Group*School	3	262.35	87.45	1.39	0.25
Error	74	4654.16	62.89		
Time (Pre-Post)	1	1.07	1.07	0.07	0.80
Time*Group	3	70.91	23.64	1.48	0.23
Time*School	1	32.61	32.61	2.04	0.16
Time*Group*School	3	11.87	3.96	0.25	0.86
Error	74	1182.08	15.97		

The mean group score for the peer-led group increased from 26.81 (SD=8.42) to 28.14 (SD=6.37), an increase of 1.33 points. The mean group score for the self-led group increased from 28.60 (SD=4.78) to 28.95 (SD=4.06), a difference of .35 points.

The repeated measures analysis of variance is summarized in Table 4.8. The F score of 1.57 and p value of 0.20 suggest that there was no statistically significant time X group interaction at the .05 level.

For self-efficacy for math careers, students in the control group scored 27.55 (SD=7.29) on the pretest and 25.22 (SD=5.92) on the posttest, a decrease of 2.33 points. Students in the adult-led group scored 23.89 (SD=7.00) on the

pretest and 26.05 (SD=7.07) on the posttest, an increase of 2.16 points. Students in the peer-led group scored 24.30 (SD=7.36) on the pretest and 25.67 (SD=6.44) on the posttest, an increase of 1.37 points. Students in the self-led group scored 26.24 (SD=4.66) on the pretest and 26.90 (SD=5.81) on the posttest, an increase of 0.66 points.

Table 4.8

Summary Table for Analysis of Variance for the Career Self-Efficacy Scale(Nonmath) by Group (N=82)

Source of Variance	df	SS	Mean Square	F	P
Group	3	75.58	25.19	0.42	0.74
School	1	0.35	0.35	0.01	0.94
Group*School	3	221.92	73.97	1.23	0.30
Error	74	4443.20	60.04		
Time (Pre-Post)	1	0.19	0.19	0.01	0.92
Time*Group	3	78.56	26.19	1.57	0.20
Time*School	1	17.67	17.67	1.06	0.31
Time*Group*School	3	2.75	0.92	0.05	0.98
Error	74	1237.33	16.72		

The repeated measures analysis of variance for math careers is summarized in Table 4.9. The *F* score of 1.57 and *p* score of 0.20 suggest that there was no statistically significant time X group interaction at the .05 level. Therefore, the null hypothesis relating to differential change among the groups was not rejected.

Table 4.9

Summary Table for Analysis of Variance for the Career Self-Efficacy Scale(Math) by Group (N=82)

Source of Variance	df	SS	Mean Square	F	P
Group	3	58.57	19.52	0.28	0.84
School	1	85.42	85.42	1.23	0.27
Group*School	3	198.12	66.04	0.95	0.42
Error	73	5066.45	69.40		
Time (Pre-Post)	1	4.18	4.18	0.27	0.61
Time*School	1	35.80	35.80	2.28	0.14
Time*Group	3	109.34	36.00	2.32	0.08
Time*Group*School	3	14.61	4.87	0.31	0.82
Error	73	1144.94	15.68		

Job Tasks

Group mean scores for self-efficacy for job tasks can be seen in Table 4.1. All groups with the exception of the peer-led group showed a decrease in scores from pretest to posttest. The control group mean score was 129.00 (SD=58.85) on the pretest and 124.91 (SD=54.26) on the posttest, a decrease of 4.09. The adult-led group mean score was 116.61 (SD=56.68) on the pretest and 114.06 (SD=57.00) on the posttest, a decrease of 2.55. The peer-led group mean score was 143.90 (SD=52.00) on the pretest and 166.37 (SD=44.47) on the posttest, an increase of 22.47. The self-led group mean score was 115.22 (SD=50.76) on the pretest and 117.38 (SD=41.88) on the posttest, a decrease of 2.16.

The repeated measures analysis of variance for job tasks is summarized in Table 4.10. The F score of 3.73 and the p value of 0.02 suggest that there was a statistically significant Group interaction at the .05 level and a statistically significant school X group interaction (F=2.85, p=0.04) for job tasks.

Table 4.10

Summary Table for Analysis of Variance for the Career Self-Efficacy Scale(Job Tasks)by Group (N=80)

Source of Variance	df	Type III SS	Mean Square	F Value	Pr>F
School	1	1192.19	1192.19	0.30	0.58
Group	3	44259.64	14753.21	3.73	0.02*
School*Group	3	33815.49	11271.83	2.85	0.04*
Error	66	261042.90	3955.20		

* Statistically significant at the .05 level.

A post hoc analysis using Tukey's Studentized Range Test revealed a significant difference between the peer-led group and all others (Alpha=0.05, df=66, and MSE=2445.79; Critical Value=3.73). Therefore, the null hypothesis relating to no differential change in job task self-efficacy among the groups was rejected.

Job Interest

Group mean scores for job interest can be seen in Table 4.1. Job interest scores for the control group decreased 4.66 points from a group pretest mean of 57.14 to a group

posttest mean of 52.48. Job interest for the adult-led group increased 3.08 points from a group mean pretest score of 50.39 to a mean posttest score of 53.47.

Job interest for the peer-led group increased from a pretest group mean of 50.65 points to a posttest group mean of 53.81, a difference of 3.16 points. Job interest for the self-led group increased from a group pretest mean of 55.00 points to a group posttest mean of 55.86, a difference of .86 points.

The repeated measures analysis of variance for job interest is summarized in Table 4.11. The F score of 0.48 and p value of 0.70 suggest that there was no statistically significant group interaction at the .05 level and no statistically significant school X group interaction (F=.82, p=.48) at the .05 level. Therefore, the null hypothesis relating to differential change among the groups was not rejected.

Table 4.11

Summary Table for Analysis of Variance for the Career Self-Efficacy Scale(Interest) By Group (N=80)

Source of Variance	df	Type III SS	Mean Square	F Value	Pr>F
School	1	70.51	70.51	0.32	0.58
Group	3	321.59	107.20	0.48	0.70
School*Group	3	550.10	183.37	0.82	0.48
Error	72	16004.45	222.28		

Educational Requirements

Group mean scores for self-efficacy for educational requirements can be seen in Table 4.1. All group means increased from pretest to posttest. The control mean increased from 117.80 (SD=52.26) to 123.09 (51.55), a difference of 5.29 points. The adult-led group mean increased from 103.26 (SD=58.14) to 122.50 (59.02), a difference of 19.24 points.

The peer-led group mean increased from 122.37 (SD=57.66) to 168.33 (SD=45.69), a difference of 45.96 points. The self-led group mean increased from 103.55 (SD=50.88) to 106.90 (SD=49.51), a difference of 3.35 points.

The repeated measures analysis of variance for self-efficacy for educational requirements can be seen in Table 4.12. The F score of 3.27 and the p value of 0.03 suggest that there was a statistically significant time X group interaction at the .05 level.

A post hoc comparison was done using Tukey's Studentized Range Test. The analysis revealed that the peer-led group mean was significantly different from all other groups (Alpha=.05, df=68, MSE=266.01, Critical Value=3.73). Therefore, the null hypothesis relating to differential change among the groups was rejected.

Table 4.12

Summary Table for Analysis of Variance for the Career Self-Efficacy Scale(Educational Requirements) by Group (N=80)

Source of Variance	df	Type III SS	Mean Square	F Value	Pr>F
School	1	1050.12	1050.12	0.26	0.61
Group	3	40146.15	13382.05	3.27	0.03*
School*Group	3	23498.58	7832.86	1.92	0.14
Error	68	277998.88	4088.22		

* Statistically significant at the .05 level.

Ho_5: There will be no statistically significant difference in career self-efficacy and interest among the four experimental groups as measured by the Career Self-Efficacy Scale (CSES).

There were no significant statistical differences for the effects of self-efficacy for math, nonmath, or nontraditional careers or for interest in careers. There were significant statistical differences for the effects of the group treatment for self-efficacy for job tasks and for educational requirements; therefore, the null hypothesis relating to differential change in career self-efficacy and interest among the groups was rejected.

Analyses of variance for group mean scores for the four treatment levels--adult-led, peer-led, self-led, and control--were conducted. In three instances (self-efficacy

for job tasks, traditional careers, educational requirements), statistically significant differences were found among the group means.

In further analysis of the three interactions, using Tukey's Studentized Test to judge comparisons of the groups, only two of the differences appear to be due to group effects, both appearing for the peer-led group, and in a positive direction. Based on analysis of the data, null hypotheses relating differential changes in self-esteem (Ho_1), career locus of control (Ho_2), locus of control (Ho_3), and knowledge of the world of work (Ho_4) were not rejected. Null hypotheses relating to differential change in self-efficacy for job tasks and educational requirements (Ho_5) were rejected.

Analyses of variance for group mean scores for the four treatment levels, adult-led, peer-led, self-led, and control, were conducted. In three instances (self-efficacy for job tasks, traditional careers, educational requirements), statistically significant differences were found among the group means. In further analysis of the three interactions, using Tukey's Studentized Test to judge comparisons of the groups, two of the differences appear to be due to group effects, both appearing for the peer-led group, and in a positive direction.

Based on analysis of the data, null hypotheses relating differential changes in self-esteem, (Ho_1), career locus of

control (Ho_2), locus of control (Ho_3), and knowledge of the world of work (Ho_4) were not rejected. Null hypotheses relating to differential change in self-efficacy for job tasks and educational requirements (Ho_5) were rejected. Thus, there were five principal hypotheses tested in the present study, all related to determining whether the treatment was effective differentially for the treatment level: adult-led, peer-led, self-led, and control group. Of the five hypotheses, only a subset of self-efficacy for job tasks and educational requirements were rejected in favor of the peer-led group of the adult-led, self-led, and control groups. Chapter 5 contains the summary, conclusions, limitations, and recommendations for the present study.

CHAPTER 5
SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate the effects of a developmental guidance unit and self-instruction module about career development on ninth-grade academically able girls. More specifically, the study examined how the unit affected social self-esteem, locus of control, career locus of control, career self-efficacy, and knowledge of the world of work. In addition, three group conditions related to the method of delivery of the unit were compared: adult helper-led, high school peer helper-led, and self-instruction.

One hundred two ninth-grade students participated in the present study. Eighty-four students (82% of the total, 45 students from Gainesville High School and 39 students from Sante Fe High School) completed all necessary pretests and posttests for data analysis. One experimental condition [Adult-Helper Led (E1), Peer-Helper Led (E2), Self-Instruction Module (E3), or Control (E4)] was randomly assigned to four different groups at each school.

The intervention was 8 weeks in duration. All groups (E1, E2, E3, E4) were administered five preassessment

instruments which included the Texas Social Behavior Inventory (TSBI), the Children's Nowicki-Strickland Internal-External (CNSIE) scale, the Career Locus of Control Inventory, the Knowledge of the World of Work Questionnaire (KWWQ), and the Career Self-Efficacy Scale (CSES). All experimental groups participated in one 50-minute session per week during weeks 1 through 8. The control group members continued with their regular class curriculum for the days in which the intervention took place with the other groups.

The adult- and peer-helper group leaders followed the sessions as outlined in the facilitator's manual (Appendix C). Throughout the intervention, adult leaders received direction in weekly contact with the principal investigator. Peer helpers also received on-going training, question and answer sessions, and feedback sessions with the adult leader in their school. During the week before the unit was administered, all students participated in taking the pretest instruments. During the week after the administration of the unit, all students participated in taking the posttest instruments. Pretest results indicated that there were no significant differences for experimental and control groups existing before the intervention.

Pretesting and posttesting incorporated five criterion measures, completed by 84 girls. The CNSIE assessed locus of control. The Texas Social Behavior Inventory measured social self-esteem. The Career Self-Efficacy Scale (CSES) measured

interest and performance expectations for math and nonmath careers and traditional and nontraditional careers. Researcher-developed instruments to measure Career Locus of Control (CLCI) and Knowledge of the World of Work (KWWQ) were used to measure the named variables.

A repeated measures analysis of variance was used to test for significant differences among experimental and control groups in amount of change from pretest to posttest. Three of the analyses indicated significant differences in pre- and posttests for the time X group interaction. For those cases, a Tukey's Studentized Test was used to investigate further. In only two cases was there a significant difference indicated for a group. The resulting data related directly to the following null hypotheses:

1. There is no statistically significant difference in social self-esteem among the four experimental groups as measured by the Texas Social Behavior Inventory.

The repeated measures analysis of variance comparing changes in group means over time indicated no statistically significant effects (.05 level). Null hypothesis number one was not rejected. In addition, no statistically significant interactions occurred for group, school, and time.

2. There is no statistically significant difference in career locus of control among the four experimental groups as measured by the Career Locus of Control Inventory.

The repeated measures analysis of variance comparing changes in group means over time indicated no statistically significant effects (.05 level) and, this null hypothesis was not rejected. No statistically significant interactions occurred when testing for effect of group, school, and time.

3. There is no statistically significant difference in locus of control among the four experimental groups as measured by the Children's Nowicki-Strickland Internal-External scale.

The repeated measures analysis of variance comparing changes in group means over time indicated no significant effects. Null hypothesis number three was not rejected. No statistically significant interactions occurred for group, school, and time.

4. There is no statistically significant difference in knowledge of the world of work among the four experimental groups as measured by the Knowledge of the World of Work Questionnaire.

The repeated measures analysis of variance comparing changes in group means over time indicated nonsignificant effects (.05 level) and null hypothesis number four was not rejected. No statistically significant interactions occurred when testing for effect of group, school, and time.

5. There is no statistically significant difference in career self-efficacy among the four experimental groups as measured by the Career Self-Efficacy Scale.

The repeated measures analysis of variance comparing changes in group means over time indicated no significant effects for nontraditional careers, for math or nonmath careers, or for interest. Statistically significant differences were found for self-efficacy for job tasks and educational requirements. Tukey's Studentized Test was used to analyze the data further. The peer helper-led group showed a statistically significant difference from the other treatment levels in a positive direction. Thus, null hypothesis number five was rejected.

Conclusions

A review of the professional literature suggested that young women, especially academically able young women, would profit from a developmental guidance unit for career development including knowledge of the world of work, women heroes, assertiveness skills, taking control of one's life skills, sex role stereotypes, and gender inequity. In the present study, a guidance unit addressing the concerns for young women did not seem to affect the self-esteem, career locus of control, locus of control, knowledge of the world of work, or five subsets of career self-efficacy. However, it appears that the peer helper-led intervention made a positive difference for self-efficacy for job tasks and educational requirements for occupations.

Peer Led Group Findings

Girls in the peer helper-led group found themselves, after the guidance unit, to feel more confident. More specifically, the girls felt more confident about completing job tasks and educational requirement for both math and nonmath careers and traditional and nontraditional careers.

A review of the professional literature suggests that young women need help in career development, especially in the areas addressed in this study. Although research with group interventions is rare, previously reported studies indicate that group interventions aimed at locus of control, self-esteem, and increased knowledge of the world of work could be successful. The group unit in this study consisted of sessions enhancing self-esteem, self-efficacy, feelings of control, knowledge of the world of work, and feelings of control over career planning and success. The unit included identifying obstacles to success, identifying strategies for overcoming those obstacles, and building skills for career success. When implemented, it did not seem to make a statistical difference on the measures used, despite favorable reports about the group unit from participants.

Other Findings

Students in the experimental groups (E1, E2, and E3) were asked to complete a 10-item survey (see Appendix D) about the intervention's impact on their knowledge, attitude, and behavior involving the content of the career development

intervention (Sabella, 1995). The postassessment instrument was a 10-item Likert-type scale using 1 as completely disagree and 10 as highest level, total agreement. The questionnaire also included two open-ended questions: "What I liked best about the group," and "what I liked least about the group."

The percent of students agreeing that they enjoyed the unit was 82%; that they would recommend the unit to another academically able girl was also 82%; that they were influenced by what they learned was 61%; that they shared what they learned with someone else was 41%; that they intend to use some of the information learned in making career choices was 79%; that they feel more confident about their career choices was 72%; and that they have, as a result of the group, some helpful ideas about their future was 43%.

One comment suggested the girls liked the group format: "We could have a free discussion about our topic." Other girls expressed that they liked "discussing and getting ideas from other members of the group" and "that we all got along and we could say what was on our mind." Girls mentioned that "there was time to listen to other people's opinions on the material, and that helped me decide." Girls said they learned some useful things: "I learned a lot about women in the work field, and basically how we stand," and "I learned about career choices." Still another concluded, "It was fun, . . . and now I know what I want to do."

Implications

This particular guidance unit was only marginally effective in facilitating change in the areas targeted by the present study. The following implications can be advanced:

1. The unit for academically able girls may need to address more specific situations instead of being general in scope.

2. Because the girls who experienced the unit provided favorable testimonies and recommended it for other girls, the unit might be implemented with girls who are academically able but low in school performance. Girls in this category often do not receive the same attention as the girls in this study but need it just as much.

3. The girls in the present study responded to the peer-led intervention for two subsets of the variables, self-efficacy for job tasks and education requirements. A peer helper-led intervention may be a possible way to consider reaching the population of academically able girls.

4. Girls who have experienced success and feel a certain level of confidence in themselves for academic achievement nevertheless increased in confidence in expectations of success for education requirements and job tasks. It is possible that similar populations of young women need extra assistance for specific areas of aspirations.

Limitations

The present study had the following possible limitations:

1. The pretests may have sensitized the students to the subject matter, influencing their responses.

2. Only one group per condition was able to participate in the present study. Because of limited access to the population and sample, a more comprehensive intervention could not be conducted.

3. The issues were also being addressed in other courses available to the participants, such as social studies classes and others. These experiences might have increased awareness of the issues and concerns addressed in the unit.

4. The two researcher-developed instruments, Career Locus of Control Inventory and Knowledge of the World of Work Questionnaire, are relatively new and need further investigation regarding validity and reliability.

Recommendations

The following recommendations are made based on this investigation:

1. Given the information revealed in a review of the professional literature, it is apparent that issues related to women in the workplace continue to be a major concern of economists and educators. The workplace in which many thousands of women are entering with new expectations and aspirations requires preparation, including knowledge,

skills, and attitudes for success. Academically able girls are a population that have the potential for making important career contributions; other needs and interests need to be researched.

2. A review of the literature revealed that women's needs, and particularly young women's needs, have been only partially identified. Guidance and counseling strategies to address those needs have been very rarely specified, as has research to assess the impact of those strategies. Effective guidance units need to be developed for teenage girls.

3. The researcher-developed instruments used in the study appear to have promise but need further research.

4. The peer-led groups exhibited the greatest gains in the study. In the future, peer leadership might be included as part of guidance delivery systems.

During adolescence, a crucial stage in the development of young women, conflicts between a drive toward personal growth and feminizing social influences occur. At the same time, girls are asked to make decisions affecting career choices and preparation for careers for a vastly changing world of work for women. Girls need guidance in identifying and overcoming obstacles to success in career choice and preparation and in developing the skills and attitudes needed in the emerging workplace. A unit led by adults or peers might be included as part of guidance delivery systems.

APPENDIX A
PERMISSION

INFORMED PARENTAL CONSENT

Effects of a Developmental Guidance Unit for
Career Development of Adolescent Females
(To be read aloud to the student)

Your academically able ninth-grade daughter is being invited to participate in a study to determine the effects of a small group career guidance unit. The subjects covered will include special obstacles for girls and planning for success in career preparation and the world of work. The study will consider self-esteem, feelings of control about careers and career planning, knowledge of the world of work, and beliefs about success.

Students will be scheduled for two sessions per week for four weeks. The meetings will be held on a rotating schedule in order to miss only one class period for each course, with the exception of one course. Sessions will include discussion and activities to increase knowledge and awareness of obstacles to success in career preparation and careers and ways of overcoming those obstacles.

No physical or psychological risks is anticipated for participants. Unfortunately, no monetary or other compensation, other than the benefit of learning valuable information, will be provided.

A decision to not participate will in NO way affect your daughter's academic standing or progress. It will also be explained to students that they are not required to answer any questions that they do not wish to answer.

Only students whose parent(s) or guardian(s) return the signature form will be able to take part in this study. Your signature on the form to allow your daughter to participate would be greatly appreciated.

If there are any questions, please call me at Gainesville High School (955-6707) or at 372-7957 in the evenings.

Thank you very much for your help.

Sign, detach, and return the form below if you wish to participate in the study.

INFORMED STUDENT ASSENT

(To be read aloud to the student)

You have been invited to participate in a study for academically able ninth-grade girls. The study will work with girls in small groups to find out whether it is helpful to learn information and skills in planning for career preparation and career success. In the groups, you will learn about possible obstacles to success and how to overcome them. The study will consider self-esteem, feelings of control about careers and career planning, knowledge of the world of work, and beliefs about success.

You will be scheduled to meet on a rotating schedule, two sessions per week for four weeks. You will miss each class only once, with the exception of one course. Sessions will include discussion and activities.

No physical or psychological risk is expected for participants. Unfortunately, no monetary or other compensation will be provided, other than the benefit of learning valuable information.

If you decide not to participate, your academic standing or progress will NOT be affected. You will not be required to answer any questions you do not wish to answer.

Only students whose parent(s) or guardian(s) return the signature form will be allowed to participate. Your signature on the form to allow you to participate would be greatly appreciated.

If there are any questions, please call me at Gainesville High School (955-6707) or at 372-7957 in the evenings.

Thank you very much for your help.

Sign, detach, and return the form below if you wish to participate in the study.

APPENDIX B
INSTRUMENTS

Career-Locus of Control (Girls)

	Yes	No
1. Decisions about a career will solve themselves if you just don't worry too much.	()	()
2. Getting the right job is more luck than skill.	()	()
3. Having a successful career means a great deal to you.	()	()
4. It's not my fault if I don't get the job that I want someday.	()	()
5. Any woman who works hard enough can be a successful manager in charge of others in an occupation.	()	()
6. There is no need to try hard, because men are going to get the best jobs anyway.	()	()
7. My parents will let me make most of my own career decisions.	()	()
8. My friends have a big influence on what I am going to choose in a career.	()	()
9. Most kids are born to have certain kinds of jobs.	()	()
10. It is best not to get your hopes up about future careers or jobs.	()	()
11. I feel that I have a lot of choice in deciding on my future and a career.	()	()
12. When someone harasses you on the job there is little you can do to stop him or her.	()	()
13. I would wear a good luck charm into a job interview.	()	()
14. I think people will be mean to me on a job for no reason at all.	()	()
15. My career choices can be affected by what I do today.	()	()
16. Problems on a job are going to happen no matter what I do to try to stop them.	()	()
17. Most of the time I think it is useless for women to try to get their way on a job.	()	()

	Yes	No
18. If a supervisor on a job wants to be someone's enemy there is little that person can do to change matters.	()	()
19. I feel that I will have little to say about what I will be paid in my career.	()	()
20. If someone I work with doesn't like me, then there is little that I can do about it.	()	()
21. It is almost useless to try because men are just plain more ambitious and successful than women.	()	()
22. Career planning and decision-making can make girls more successful in their careers.	()	()
23. Women get promoted more because of their appearance than because of job skills.	()	()
24. In a job interview, appearance is more important than skill.	()	()
25. My parents will support me whatever my career choices.	()	()
26. Boys I know as friends, will support me in my career choices.	()	()
27. Men will always have the advantage in jobs even though women keep trying.	()	()
28. When good things happen to women in the world of work, it is mostly due to hard work.	()	()
29. I feel it is better to be smarter than prettier in the world of work.	()	()
30. I think that it is more advantageous to be a boy than a girl.	()	()
31. I think it is better to be a boy more than a girl.	()	()
32. Things are about the same for young women today as they were when your mother was growing up.	()	()
33. It is important for women to be forceful rather than easy going.	()	()
34. Women's role in society is to be more supportive than assertive.	()	()

KNOWLEDGE OF THE WORLD OF WORK QUESTIONNAIRE

1. A larger percentage of women is entering the work force and _____ percentage is being promoted to higher levels .

 a.the same b. a lesser c. a greater d. an unknown

2. Women are working longer, more hours, and are spending less time in their homes ____.

 a. taking care of children b. watching television c. reading
 d. exercising

3. Almost _____ of the present work force in 1995 are women.

 a. one-eighth b. one-third c. one-sixteenth d. one-half

4. A _____ woman today can expect to work for 25 years.

 a. divorced b. single c. widowed d. married

5. A _____ woman can expect to work for 45 years.

 a. divorced b. single c. widowed d. married

6. Inequities exist for women in comparison to men in ____.

 a. education and training b. access to positions
 c. promotion d. a, b, & c

7. The greatest increase in higher paying jobs between now and the year 2000 will be in those requiring _____ (36%).

 a. biology and medicine
 b. liberal arts and humanities
 c. math and science
 d. computers and technology

8. Females earn _____ men in equal positions.

 a. consistently more than
 b. consistently equal to
 c. on the average equal to
 d.consistently less than

9. Females earned about ____ of what men earned in 1992.

 a. 50% b. 75% c. 100% d. 150%

10. Women are still the primary caregivers for_____.

a. for children only b. for elders only
c. for children and elders d. for preschoolers

11 The majority of women are still employed in low-paying, "dead end" jobs and in _____ occupations in which the majority are females.

a. traditional b. powerful c. executive d. conservative

12. _____ households have the lowest median family income.

a. Female-headed b. Male-headed
c. Two-parent d. Single-parent

13. Career _____ is the tendency to have a low level of occupational aspiration, in spite of having the ability.

a. development b. undershooting c. planning d. dependency

14. ____ career aspirations have been attributed to occupational stereotyping, childhood conditioning, sex stereotyping of jobs, low self-esteem, and low expectations of success.

a. Higher b. Professional c. Lowered d. Men's

15. Adolescent females show a _____ in self-esteem and aspirations, as compared to boys.

a. rise b. drop c. change d. stability

16. Girls' lower aspirations are influenced by gender bias in the schools, especially in a lower quality and amount of _____.

a. classroom attention b. studying
c. discipline d. ability

17. Sex desegregation has increased on the whole, except in the____ fields, but mostly in the occupations in which men are paid less, and the number of workers is declining.

a. teaching b. engineering c. automotive d. managerial

18. The Glass Ceiling Report is thought to have increased hiring and promotion of female executives_____.

a. for a long period of time
b. for only a short period
c. indefinitely
d. information is unknown

19. Sex role stereotypes include the belief that men and women should have_____ at home and at work.

a.different roles
b. parallel responsibilities
c. competitive roles
d. better pay

20. A "hostile atmosphere" in terms of sexual harassment is illegal in ____work and educational settings.

a. only b. neither c. both d. part time

APPENDIX C
MANUAL

FROM BABY DOLLS TO BOARDROOMS

A Structured Guidance Unit

OVERVIEW: SESSIONS ONE -NINE

SESSION ONE: "Sugar And Spice" And "Puppy Dog Tails"

Objectives:

- To introduce the unit
- Identify some sex role stereotypes
- Identify messages that affect career success and choices

SESSION TWO: Gender Roles for Better or for Worse

ACTIVITY ONE

Objectives:

- To introduce the unit
- Identify sex role stereotypes
- Identify messages that affect career success and choices

ACTIVITY TWO

Objectives:

- Identify sex role stereotypes
- Recognize that women's roles are changing
- Identify effects of sex role stereotyping, especially in careers

SESSION THREE: Women in the World of Work- Who Are the Heroes?

Objectives:

- Identify females who have overcome obstacles
- Identify characteristics necessary to overcome obstacles

SESSION FOUR: THE CHALLENGE OF CONTROL

Objectives:

- Identify examples of positive/control vs. negative/blaming ideas.
- Describe the relationship between positive and negative ideas and success in careers

SESSION FIVE: I Am Capable

Objectives:

- Identify the difference between interest and capability.
- Identify interests and capabilities that relate to career choices.
- Identify differences between being interested, being skilled, achieving mastery , being gifted.

SESSION SIX: Into Action-Being Myself In Every Situation

Objectives:

- Identify assertive behaviors
- Recognize that behavior does not have to depend on feelings
- Identify options for acting differently.
- Develop a non-judgmental self-appraisal for situations which require social, leadership, and authority-related skills.
- Identify differences in competition vs. consensus situations

SESSION SEVEN: The Big Picture

Objectives:

- Identify job types that are related to skills and interests.
- Identify jobs that fall into those types.
- Identify next step for success in career preparation and choice.

SESSION EIGHT: Career Bingo And Puzzle

Objectives:

- Identify facts about the world of work.
- Identify facts about heroes.

SESSION NINE: Affirming Our Strengths

Objectives:

- Identify strengths and areas of possible improvement related to jobs.
- Identify sources of support.
- Identify fantasy jobs.

SESSION ONE: "Sugar And Spice" And "Puppy Dog Tails"

OBJECTIVES:

- To introduce the unit
- Identify some sex role stereotypes
- Identify messages that affect career success and choices

MATERIALS

Slips of paper and pencils or pens

PROCEDURE:

Begin by saying:
"This is the first of 8 sessions that we are going to have together. We will be looking at some important issues which face young women in our society. Some concerns and issues may be familiar to you. However, it's time to take a new look at them, to identify the ways that they affect us, and what we can do about them."
To make our sessions more interesting, we will be working together in small groups. You will have a chance to be in more than one group or team during the different sessions. We will be sharing ideas and challenging opinions, as well as examining some hard facts."

"Now, let's begin today's session. Today women are entering the world of work in greater numbers than ever before. They have the chance to earn more and achieve more than ever before. They have more choices available. In this session, we will learn about and discuss some things to make those choices more available."

"First, let's start by getting to know each other a little bit better. I want you to think of something you have done and are proud of or are pleased with. Can everyone think of something? "
Pause.

Then say,
"Take your time."

Pause.

Next say,
"Let's start with you. Please say your name and tell us two things you thought of.

Allow time for the girls to go around individually and say their names and tell the two things.

PROCESSING:
Lead the discussion, allowing the girls to remain in a large group of 12 girls.

Ask questions such as:
"How hard was that? What made it hard?"

Possible reasons might be: Fear of rejection or seeming boastful, fear of others' emotions such as jealousy, snubbing, one-upping, taunts, fear of going against the "traditional" woman image (passive, protected from risk, not competitive, putting others first to the detriment or deferment of self, etc.). Accept any contribution.

Say:

"Did you know that: One way boys and girls have been found to differ is the things they do. Some research shows that girls and women are more likely to respond to a compliment about their accomplishments with something like: 'Oh, it was just luck,' or, 'I had a lot of help,' or, 'You'd have done much better'. "
"Boys and men are more likely to respond, 'Thank you,' or, 'I worked hard on that,' or, 'I was pleased with those results.' Categories include attributing success to something outside and shifting the focus immediately to someone else."
"In fact, as late as 1993, some research showed that boys tended to talk more about their accomplishments than girls."

Say:

"Now, let's get into some smaller groups to discuss your own ideas further.
"There is a lot to do in the limited time that we have. So, let's begin by forming a discussion groups or teams."

1) Divide the group into three small groups of about four students each. Position the groups in semi-circles, facing the front of the room.
2) One member in each semi-circled team, perhaps the person on the far right, is designated as the "Starter". When requested, the starter moves her chair in order to open or close the small group. This person also starts a group task by sharing ideas first in a "go around" procedure.
Starters can be appointed or alternated; however, the expediency of opening and closing groups quickly, with the least amount of disruption is of concern.

Say:
"Here are your directions:
1) Name some adjectives that describe what boys are like. How many of these are really true? How many are not?
2) Name some words that describe girls. How many are true? How many are not? "
Would the 'starter' please record the answers."
Allow time for the girls to write down their responses.

Direct the girls to turn their desks to form the large group again. The starters need only turn their desks to face the front.

Lead a discussion.

Ask:
"How do the labels and messages that boys and girls receive affect self-esteem? Achievement? Feelings of control? Expectations of success? How do these messages affect choice of careers? " (Possible answers: Conflict between wishes for growth and the messages, self-doubt, fear of success, etc. For others see Appendix 1.)
"How do these messages affect women in the world of work? For example, do bosses expect women to gossip,

i.e., not be trustworthy in business, then give a job to a man?"
"A 36% growth is expected in jobs in math- and science-related fields in the next ten years (AAUW study). Yet, young women are still not signing up for math or science courses? Why do you think this is true? "

Say:
"During the course of this unit, we will explore the ways messages like these affect the lives of women."

Ask:
How was this sharing in the small group different from sharing in the large one?
(Possible answers: felt safer, felt less "on the spot", more comfort with less attention, didn't have to speak as loudly, less comfort because you felt pressure to talk, etc.)

CLOSURE:
"A lot of thoughts about ourselves are not genetic. They are given to us by influences outside of us. Today we learned that boys and girls often get different messages about self-esteem, achievement, and success."
"One thing to realize from this is that some of these differences have also made their way into the world of work. Some of the messages may be true, some not. The more we become aware of those messages, the more we are able to pick and choose which ones we want to listen to and which ones we do not."
"Messages come to girls about education and careers. This unit is about messages."

PRACTICE:

Try receiving a compliment about your accomplishments in a different way. Respond differently than you usually do.

Ask your mother, grandmother, or another woman how they learned to accept compliments.

How do you make a decision about which courses to take? About the ones in which you will try hardest?

SESSION TWO: Gender Roles for Better or for Worse

ACTIVITY ONE

OBJECTIVES:

- To introduce the unit
- Identify sex role stereotypes
- Identify messages that affect career success and choices

MATERIALS:

Handouts-Characteristic Checklist

PROCEDURE:

Pass out the "Characteristic Checklist".

Begin by saying:

"In the last session we discussed some of the messages that can affect how boys and girls feel about themselves and success. Some of the messages are true, and some are not. We found that those messages also have made their way into the world of work."

"Today we will explore expectations for women in the past and in the present. We will do this activity in pairs. We will interview a partner, looking at a list of characteristics and

1. Choose three that describe us.
2. Choose three that we would like to develop or strengthen.

We will then introduce each other to the group, naming one of the characteristics that describes our partner, and one that she would like to develop or strengthen.

Divide the group into pairs by numbering off (1,2...1,2..., etc.) . Allow 10 minutes for the girls to get to know each other and to complete the interviews.

PROCESSING:
Meet back in the large circle and do a go-around to allow each girl to introduce her partner and tell the two characteristics.

CLOSURE:
Say:
"We have seen a list of characteristics and realize that there are many traits that are necessary and useful both in daily life and in the world of work. If we don't feel we have a necessary trait, then we can begin to develop needed strengths."

ACTIVITY TWO

OBJECTIVES:
- •Identify sex role stereotypes
- •Recognize that women's roles are changing
- •Identify effects of sex role stereotyping, especially in careers

MATERIALS:
Handouts-
Bem Sex Role Stereotype Checklist
The Traditional Woman

PROCEDURE:
Say to the large group:
"Now we will discuss ways boys and girls differ in school, sports, clubs, friendships, and family life. We know that we can't speak for all boys. That would be a stereotype in itself. Let's do a go-around to bring up some of the ways you have observed."

Call on someone to begin. Allow time for everyone who wants to share to share.

Next, lead an exploration of sex role stereotypes.

Say: Look at the Characteristic Checklist. In 1972, Sandra Bem did research to determine which characteristics boys and girls though of as masculine and

which as feminine. Let's play with this list and see what we come up with.

1) Put 'M' beside a characteristic that might be thought of as 'masculine'.
2) Put 'F' beside the characteristics that might be thought of as 'feminine'.
3) Put 'N' beside the characteristics that might be thought of as 'neither'.

These are not necessarily what you believe are masculine, etc., but the way you feel *most* people would classify them."

Allow 5-10 minutes.

Say:

"Now I will pass out the list that Sandra Bem came up with, the Bem Sex Role Stereotype Checklist, and the more recent, 'Traditional Woman List." Compare your list with the other two.

"How did the changes come about? How widespread?

"Who would ascribe to them ?

"Are the traits learned or inborn? For example, if you wanted to become a leader, or become more reliable, what might you do?

"How have the stereotypes affected women's career choices and preparation?"

CLOSURE:

Say:

" Later research found that individuals high in both masculine and feminine traits had higher self-esteem and achievement. It is true that options are changing for females in career preparation and in choosing careers once open only to men. "

"However, here's what is true of schools (1994):

1. Teachers tend to call on boys more than girls.

2. Teachers tend to help boys reason through operating everything from staplers to computers. They tend to do-it-for girls.

3. Teachers tend to give .9 seconds for a response before they go on to the next student or answer the question themselves. This has been

found to limit students, especially girls in math and science classes, where they are already often a minority and feeling unsure.

4. In classes in which the atmosphere is competitive rather than cooperative, or ones in which mistakes are not seen as "okay", asking questions can be very risky. Girls often feel stress and stop asking questions.

5. Sexual harassment and discrimination by male peers often sets a tone that says boys are dominant and more important, and girls suffer in self-esteem and achievement.

6. Boys' responses in class are more often questioned and probed to get them to think more. Girls are more often told, "Good," "Great," or "Uh-huh," or their responses are not commented upon at all."

CHARACTERISTIC CHECKLIST

___Self-reliant
___Yielding
___Helpful
___Defends own beliefs
___Cheerful
___Moody
___Independent
___Shy
___Conscientious
___Athletic
___Affectionate
___Theatrical
___Assertive
___Flatterable
___Happy
___Strong personality
___Loyal
___Unpredictable
___Forceful
___Feminine
___Reliable
___Analytical
___Sympathetic
___Jealous
___Has leadership abilities
___Sensitive to other's needs
___Truthful
___Willing to take risks
___Understanding
___Secretive
___Makes decisions easily
___Compassionate
___Sincere
___Self-sufficient
___Eager to soothe hurt feelings
___Conceited
___Dominant
___Soft-spoken
___Likeable
___Masculine
___Warm
___Solemn
___Willing to take a stand
___Tender
___Friendly
___Aggressive
___Gullible
___Inefficient
___Acts as a leader
___Childlike
___Adaptable
___Individualistic
___Does not use harsh language
___Unsystematic
___Competitive
___Loves children
___Tactful
___Ambitious
___Gentle
___Conventional

Source: Bem Sex Role Inventory, Bem and Bem, 1972

Worksheet

SEX ROLE STEREOTYPE CHARACTERISTIC LIST

Masculine	Feminine	Neutral
Self-reliant	Yielding	Helpful
Defends own beliefs	Cheerful	Moody
Independent	Shy	Conscientious
Athletic	Affectionate	Theatrical
Assertive	Flatterable	Happy
Strong personality	Loyal	Unpredictable
Forceful	Feminine	Reliable
Analytical	Sympathetic	Jealous
Has leadership capabilities	Sensitive to needs of others	Truthful
Willing to take risks	Understanding	Secretive
Makes decisions easily	Compassionate	Sincere
Self-sufficient	Eager to soothe hurt feelings	Conceited
Dominant	Soft-spoken	Likeable
Masculine	Warm	Solemn
Willing to take a stand	Tender	Friendly
Aggressive	Gullible	Efficient
Acts as a leader	Childlike	Adaptable
Individualistic	Doesn't use harsh language	Unsystematic
Competitive	Loves children	Tactful
Ambitious	Gentle	Conventional

Source: Bem Sex Role Inventory (Bem and Bem, 1972)

THE TRADITIONAL WOMAN

1. Depends on someone else for her primary sense of security
2. Tries to please at all times
3. Tries to avoid all arguments
4. Needs external approval to maintain a sense of worth
5. Tries to maintain harmony at all costs
6. Cannot express anger easily, if at all
7. Can be extremely skilled and competent, but tends to discredit herself
8. Has feelings of guilt which are quickly and often aroused
9. Is quick to assume blame
10. Is other-centered
11. Expresses opinion apologetically
12. Places her own needs second to those of family and others
13. Is nonassertive in many respects
14. Can meet many of her own needs only covertly and deviously
15. Hesitates to accept leadership roles, but will work behind the scenes

Source: DeRosis, Helen A. Woman and Anxiety, pp. 74-75. (1979)

PRACTICE:

Make observations of people whom you know this week. Keep a journal to record your thoughts and observations, such as:

1. If you were married, would you support your husband if he wanted to be the homemaker?

2. If you decided to remain single, what would your friends and family think of your choosing a non-traditional (male-dominated) career?

3. What are the difficulties in both parents' working, either with or without children?

4. What are the difficulties of being single (unmarried/widowed/divorced) with a family and working ?

SESSION THREE: Women in the World of Work-Who Are the Heroes?

ACTIVITY ONE

OBJECTIVES;

- Identify females who have overcome obstacles
- Identify characteristics necessary to overcome obstacles

MATERIALS:

Pencil and paper

PROCEDURE:

Say:
"In the last two sessions we learned that girls receive messages that can work against them to achieve success in school and careers. The messages, the options open to women, and the amount of success is changing today. In this session we will learn about models for our own success."

Then say:
"Think of someone whom you admire. It may be someone you know or have read about, seen on television, or heard about. "

"Write down:

1. Three names of living people who will make decisions that will have a great impact on the world.
2. The name of someone whom you admire.
3. The name of someone who has had a great influence on your life."

Divide the girls into three groups of four. Allow 5-10 minutes for the groups to write and share.

Say:
"Please stop and come together as a large group."
Pause.

PROCESSING:

Say:

"Look at your three people. Let's take a count. Raise your hands. How many were male? " (Pause.) "How many were female? "(Pause.)

Allow individuals to go-around to share the names with the large group.

Then say:

"What were some characteristics of these women who were really today's pioneers?" (Possible answers might be: Courage, planning, working for a goal, believing in themselves, not letting others discourage them, educated, etc.)

"Who were the people whom you admire and why ? "

Allow the girls to share.

"Who were the people who have had a great impact on your life?"

Allow the girls to share.

CLOSURE:

Say:

"The women we have named here are all women who have succeeded in spite of the messages that were sent to them as children and as young women. The characteristics that they showed allowed them to take control of their lives and achieve at unexpected levels. They made it happen! Young women today do not have to be traditional. The way is open to you today to achieve your dreams."

ACTIVITY TWO

OBJECTIVES:

•Identify females who have overcome obstacles

MATERIALS:

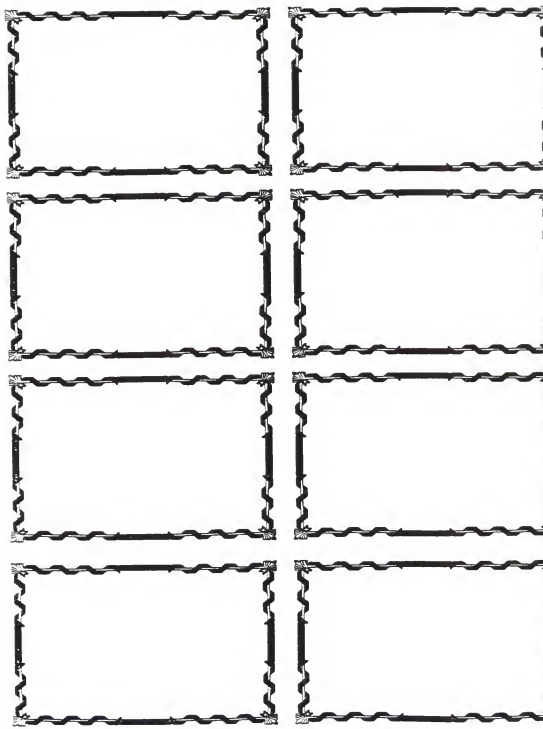
Card Game

PROCEDURE:

Say:
"Now we will play a game that will help us to get to know more about other great women."

Divide the girls into three groups of four girls each.
Say:
"There are many women throughout history, as well as today, who have been successful and have made great achievements. We may not be familiar with their names, partly because it is only recently that the contributions of women have been acknowledged. Perhaps in a few years, some of you in here right now will be included in a game of heroes."
Then give directions:
"For this activity, we play a game, partly based on skill and partly on chance. You may know this game as 'Concentration' or 'Memory'. The object is to turn over two cards that match. If they do match, you keep the pair and play again. If the two do not match, your turn is over, and the next person to your left plays her turn." The person with the most pairs at the end of the time period wins. You have 10 minutes to play. Now, begin."
After ten minutes, say:
"Let's return to the large group."

PROCESSING:
Lead a discussion, allowing time for answering:
" What did you notice about playing? Which parts of playing were based on skill? On luck? (Possible answers: Where the cards lay, whether names were familiar to the players or not, etc.) How might a player enhance her chances of winning? (Possible answers: memorize the information, play more often, etc.)"
"What observations did you have about the women whose names were on the cards?"



She jointly developed the **cotton gin,** although Eli Whitney usually is given credit: Chatherine Littlefield Greene.

A Quaker, she helped organize the first **women's rights convention** in 1848, held in Seneca Falls, N.Y.: Lucretia Mott.

She **discovered DNA**, the basic building block of life, although credit is usually given to someone else: Rosaling Franklin.

She personally led more than 300 slaves to freedom: **Harriet Tubman.**

She was arrested for trying to vote in the November, 1872 general election: **Susan B. Anthony**.

She was the first American-born Roman Catholic saint: **Elizabeth Seton.**

She was the first female member of the president's cabinet, becoming secretary of the **U.S. Department of Labor** in 1932: Francis Perkins.

She was the first female attorney to present a case before the Supreme Court, and was the first **woman presidential candidate**-in 1884- with the backing of a political party: Belva Lockwood.

She was the first American-born woman to win a **Nobel Prize in medicine**: Barbara McClintock.

Cases in sex discrimination in employment are filed through the Equal Employment Opportunity Commission (**EEOC**).

She discovered **penicillin**, although someone else is usually given credit: Elizabeth Stone.

The "glass wall" describes the division of college campuses into separate channels for men and women into different educations leading to separate and unequal futures. So far, the "hard sciences" are on the male side, for example, and "soft sciences", humanities, and education. This applies to students and to faculty, for the most part.

Girls mistakenly tend to view male-dominated occupations, especially those in math and science-related fields, as beyond their **ability**.

In 1970, only 9 percent of **medical students** were women. In 1994, 39 percent were women. The major Ivy League colleges accepted more women than men for the first time in 1995.

Through Title IX, sex bias was outlawed in school athletics, career counseling, financial aid, medical services, admissions practices, and the treatment of students. Violators were threatened with the loss of federal funds. However, between 1972 and 1991 no school lost a single dollar of federal funds because of sex discrimination.

43% of **law students** today are female. 30 years ago, less the 4% were women.

Toni Morrison wrote **Beloved** and **Sula**, novels based on the African-American experience, and won both the **Nobel and Pulitzer** prizes for literature.

She was the first female jockey to win a **Triple Crown event:** Julie Crone won the Belmont Stakes aboard Colonial Affair in 1993.

Maya Angelou is a writer of poetry, including reciting her poetry at Bill Clinton's presidential inauguration.

She was the first African-American millionaire: **Sarah Breedlove.**

Dorothy Parker (1893-1967) was a pioneer in **journalism** at a time when the field was dominated by men.

First Justice of the Peace, in 1870, she was the first female to hold public office: Esther Morris Cabin.

Golda Meir helped establish the Jewish nation of Israel in 1948, uniting factions by serving as leader of the Labor Party, as foreign minister, and as **prime minister** of Israel.

Marie Curie (1867-1934) became the first woman to win the Nobel Prize in science and the first to win **two Nobel Prizes,** and working with her husband discovered radium.

Dr. Bernadine Healy was the first woman **director of NIH**, the National Institutes for Health.

She was the first woman inducted into the **Inventors' Hall of Fame**. She is known for her work in developing drugs to fight leukemia, AIDS, septic shock and tissue rejection: **Gertrude Belle Elion.**

She was the first woman and the first Hispanic to be named **surgeon general** of the United States: **Antonia Novella.**

She was the **first** American woman **doctor: Elizabeth Blackwell.**

Sex desegregation has increased on the whole, except in the **engineering** fields, but mostly in the occupations in which men are paid less, and the number of workers is declining.

The Glass Ceiling Report (U.S. Department of Labor, 1991) is thought to have increased hiring and promotion of **female executives** for only a **short period. In** 1993, businesses were invited to a Congressional follow-up meeting. Only three businesses showed **up.**

The Equal Employment Opportunity Commission (EEOC) published guidelines making sexual harassment in the workplace **illegal.**

A **"hostile atmosphere"** in terms of sexual harassment is illegal in both work and educational settings.

Race-car driver Lyn St. James was the first woman to win the International Motor Sports Association Camel GTO series. She holds 21 speed records. When people exclaim in disbelief that a woman can go **212 m.p.h.**, she tells them, "You see, the car doesn't know I am a woman."

Florence Nightingale (1820-1910) turned down two marriage proposals and left home to work as a nurse in the Crimean War, pioneering nursing as a respectable career for women, and was the first to use **statistics** to look at health problems of whole populations.

Margaret Mead (1901-1978) made a name for herself and anthropology by documenting practices in other cultures such as New Guinea, that broke stereotypes for women, families, and children.

Rachel Carson (1907-1964) wrote Silent **Spring**, a book that shattered people's belief that industrialization was not ruining the environment.

Susan B. Anthony (1820-1906) led the women's suffrage (**voting rights**) movement at a time when only white males could vote. She also was among the first to demand the right of African Americans to vote.

Gertrude Belle Elion (1918-) developed successful drug treatments for cancer, other diseases, and kidney transplants, winning the Nobel Prize for medicine. She had decided at age 15, seeing her grandfather die horribly of cancer, that she would do something about it.

Jane Addams (1860-1935) was a co-winner of the 1931 Nobel Peace Prize for her life's work in promoting peace and humane living conditions for all people. She studied slums in Europe, the founded **Hull House**, a famous first settlement for the poor in Chicago.

Vera Cooper Rubin (1928-) made discoveries in **astronomy** that dramatically changed scientists' views, including showing that as much as 90% of the universe is made of invisible matter.

PRACTICE:

1. Make observations of women whom you know this week. Keep a journal to record your thoughts and observations, such as thoughts about decision-making, budgeting, sharing tasks around the home, efforts to get ahead in their jobs.
2. Think about this:

 If you were married, would you support your husband if he wanted to be the homemaker?

 If you decided to remain single, what would your friends and family think of your choosing a non-traditional (i.e., presently male-dominated) career?

 What are the difficulties in both parent's working, either with or without children?

 What are the difficulties of being single with a family and working?

SESSION FOUR: THE CHALLENGE OF CONTROL

OBJECTIVES:

- •Identify examples of positive/control vs. negative /blaming ideas.
- •Describe the relationship between positive and negative ideas and success in careers

MATERIALS:

Challenge Me-A card game
Negative Poster; Positive Poster
Clock with second hand

PROCEDURES:

Begin by saying to the whole group:

"In our sessions we have identified messages that women receive from society, peers, and families about how they are supposed to feel, think and act. We also discovered that if we become aware of the influences, then we can decide how to respond. We have seen that many women have succeeded. Sometimes the messages are positive and sometimes they are negative."
"In this session we will explore how negative and positive thinking affects success. What we think and say can influence how we act. If say positive things to ourselves, for example, it tends to help us succeed. When we say negative things, we often set ourselves up for failure and get more negative results.
"Let's look at the meaning of the words 'positive' and 'negative. '" (Show posters). By 'negative', we mean statements or thoughts that blame, that express self-doubt, or say that the results are due to luck. By positive, we mean statements or thoughts that take responsibility, express expectations of success , and

encourage the taking of control. Let's think of some examples."

Next:
Lead a discussion in which the group talks about times when they have had negative thoughts and when they have had positive thoughts. How were these related to actions? Success?

ACTIVITY ONE:

Divide the participants into pairs. Play the card game, *Challenge Me.* Pass out the decks of cards to each pair and read the directions:
"The object of the game is to learn to identify statements that are positive and that put you in control of your life, as well as identifying negatives in which you give your power away. You win the game by having the most cards when I call, "Time!" One of you will deal the cards.
"There are 20 cards in each deck, so each of you will be dealt 10 cards face down. Arrange them in a one pile or stack in front of you.

"Players turn the top cards from their piles at the same time and read aloud the statements, placing them face up on the table. One card is challenging the other. Players decide whether the statements are negative or positive. "The winner is the one with the positive statement card, who then collects the other player's negative card. Play continues until all cards have been turned and a winner determined by who has won the most challenges.

"If both cards are the same (e.g. two negatives), then play continues and the next turn of the cards determines who wins the tie. If players disagree about whether a statement is negative or positive, they consult the group leader who refers to the master list of statements.

Move about and help answer questions, using the master list as a reference, and encourage the fun of the game. Allow about ten minutes, then call "Time!"

Discuss the participants' reactions. Clarify any statements on the cards. Play another round, if time permits.

ACTIVITY TWO:

Say:

"Now, let's move into groups of three persons each." This can be done by putting the winners in one group and having them divide into two groups. The losing group does the same.

Explain the new game, played with the same cards. Begin by having each group of three number off, 1, 2 and 3. The first person in each group will be the "Judge." The other two will be the players.

The cards are dealt as before, ten to each person, face down. The difference in this game is that the cards will be turned one-at-a-time. The first player will read aloud the statement on the card and then will have 15 seconds to come up with an *opposite* statement related to the situation implied on the card.

EXAMPLES:

Negative: I probably would get better grades if I hung around with other people.

Restated Positive: I probably would get better grades if I managed my time better.

Negative: I don't care that I didn't get that job, it's only for "Dumb and Dumbers", anyway.

Restated Positive: If I had submitted a better resume, I would have gotten that job.

The judge decides if the player has given an example of an opposite statement and awards a point. Then, the next player turns a card, reads the statement, and so on.

After about ten minutes, call time and assemble the whole group for final discussion.

PROCESSING:

Discuss the girls' reactions to the game, looking for attitudes about competition, winning, challenging, etc. Clarify any statements that may have been challenged. Give additional examples, relating the negative and lack of control in a situation to chances of success. Can negative statements be used
as a motivator? Can positive statements make a person seem like bragging or
having false confidence. What's the difference? How are negative and positive statements, such as those on the cards, related to success in the world of work? Getting a job? Going to college? Being successful in school?

CLOSURE:

Say:

"Negative and positive statements can influence success in many places. Taking responsibility , being self-confident, and taking more control in one's situation and life often leads to more success. Blaming others, relying on luck, and ignoring choices contribute to failures in school, home, and the world of work."

PLACARDS: POSITIVE & NEGATIVE

NEGATIVE

Statements or thoughts that:

1. BLAME
2. EXPRESS SELF-DOUBT
3. SAY THAT RESULTS ARE DUE TO LUCK

POSITIVE

Statements or thoughts that:

1. TAKE RESPONSIBILITY

2. EXPRESS EXPECTATIONS OF SUCCESS

3. ENCOURAGE TAKING CONTROL

PRACTICE:

1. Notice the next time you are around someone who is having difficulty with a task or a goal. Do they say, "I can't?" What do they say to justify their "I can'ts?"
2. Ask someone whom you admire about a difficult time or a time when they were tempted to give up a dream or goal that they had. Ask what kinds of things they told themselves.
3 Read a biography of one of the women heroes mentioned last week. Did they have difficulties? Did anyone ever tell them that they would not succeed? What happened? What did they tell themselves?

CHALLENGE ME-A Card Game

STATEMENTS:

Even numbers are positive. (Taking control.)
Odd numbers are negative. (Giving away power.)

1. I would have become supervisor, but my boss has a hang-up about women.
2. I didn't get the job because I didn't let my boss really know that I could do the job.
3. He keeps sexually harassing me because he is a sexist pig.
4. He harasses me. I've been shy about confronting him.
5. That company doesn't understand women.
6. If I worked for that company I know I would need to be assertive.
7. You can't get into engineering, that's a man's field.
8. If I went into engineering, I would have to have good skills in math.
9. No matter what a woman does, men are going to get the top jobs.
10. Men might have an edge, but there are lots of things women can do to prepare and be qualified.
11. I feel I won't have much to say about what I get paid.
12. Working hard and doing the best job can determine what I get paid.
13. It doesn't make any difference about effort, you get paid what your boss wants to pay you.
14. If I learn to negotiate well, I can get what I deserve in terms of salary and benefits.
15. Sometimes you just have to put up with a bunch of people you don't like.
16. By doing a good job, people will respect my work. We do not have to become good friends.
17. It's useless to try to get my way on a job.
18. If I am assertive and work hard, I will succeed at my job.
19. It doesn't make a difference. Most kids are born to have certain kinds of jobs.
20. If I plan well, get the proper training, and work hard, I can succeed in my chosen area of work.

21. I probably would get better grades if I hung around with other people.
22. I probably would get better grades if I managed my time better.
23. I don't care that I didn't get that job, it's only for "Dumb and Dumbers", anyway.
24. If I had submitted a better resume, I would have gotten that job.

SESSION FIVE: I Am Capable

OBJECTIVES:

- Identify the difference between interest and capability.
- Identify interests and capabilities that relate to career choices.
- Identify differences between being interested, being skilled, achieving mastery, being gifted.

MATERIALS:

List of 34 Hottest Careers
Placards for Interest, Skilled, Mastery, Gifted

PROCEDURE:

Begin by saying:
"In the last session we learned how our own messages to ourselves can influence success. Negative and positive statements can influence success, especially if they influence the actions we take."
"In addition, knowledge of the way our interests, capabilities, and talents relate to choices about our actions can help us be successful."

Say:
"Today we will look at our capabilities and interests. Most people underestimate their capabilities. "
"What influences how you feel about your capabilities?" (Possible answers: Not ready, not properly prepared, not interested, lack of coaching, previous lack of success, etc.)

Then lead a discussion:
"*Capable* means "skilled". Remember back in your childhood, when you were learning to ride a bike. How many of you wanted to learn to ride a bike ? (That can be called *interest* level). How many rode a bike perfectly the first time (That can be called*Gifted.*) ? If you didn't the first time, how did you finally accomplish that task?

What did you have to do? (Develop the skills, develop *mastery* .) "
"Most of us had to attempt riding the bike over and over again to become skillful. How many can ride with no hands? Do a 'wheelie' ? Win a motocross race? Enter the Tour de France? Perform on a tightwire in a circus?" You learned, developed skills, and now have acheived a level of *mastery* .

Lead a discussion on the difference in capability between having *Interest* , *Skill* , *Mastery* , *Giftedness* related to a task or career .

Next, say:

"Let's do some informal research. By a show of 'thumbs-up' or 'thumbs down', indicate whether you agree (up) or disagree (down), or are undecided (fist). I will count, then ask some of you to share the reasoning behind your opinion.

Ask each question, allowing time for the girls to "thumb vote". Count the votes so that you can summarize at the end of the discussion.

After each question, ask one of each position to explain her reasoning.

"Is it possible to not be interested in a task or job and feel you are not capable?

Is it possible to be interested, have the ability, and not succeed?
(e.g., not have mastery because you have not taken appropriate action).

Is it possible to be really talented or gifted at something and still not succeed?
(e.g., lack of discipline, lack of effort, , not taking appropriate action).

Is it possible to have talent (giftedness) and not mastery? Mastery and not talent?"

Interest > skill > mastery
leads to leads to

Lead a discussion:

Say:

"What does the skill or learning for a career depend on? Not ability alone. It can depend on interest, inborn giftedness, and the actions you take such as training, discipline, etc.

"Does interest affect performance (skill)? Does interest affect whether a person is capable? Does it affect ability? Mastery? Can you be interested in just about anything? "Could you probably master about anything?

Important: Define levels of involvement with a career: interested, skilled, mastery, gifted).

Then say,

"Let's look at how this applies to jobs. Here is a list of the hottest jobs in the next ten years."

Pass out the "List of 34 Hottest Jobs".

Direct the girls to form groups of six. Girls pause to choose 3 jobs they might be interested in for the future. They mark the ones chosen with an "X". Each girl then takes a turn, physically placing the other five girls in the group into levels: Masterful, Skilled, Interested, Gifted of the jobs they themselves are interested in.
The statement is: "I think you can be (masterful, skilled, interested, gifted) at this job that I am interested in."
Girls who are being placed or chosen for the jobs must not comment immediately, but must save the comments for the discussion after the activity. They should note to themselves any conflict, disagreement, or other feelings associated.

PROCESSING:

Lead a discussion. Ask:

"Which occupations were most chosen: Why?
What was it like to place people in occupations and levels? (What did you consider as you placed them?)

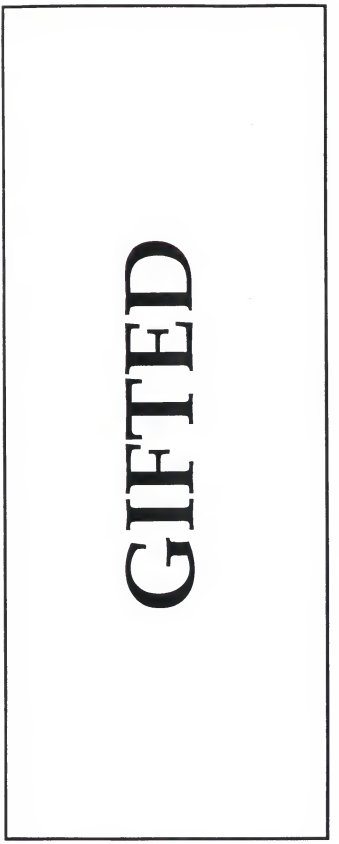
POSTERS:

INTEREST, SKILL, MASTERY, GIFTED


INTEREST


SKILL


MASTERY


GIFTED

What was it like to be placed? (Discuss how your self-assessment differed from from the "placer's", if it did.) What difficulties are posed when you have many interests/capabilities? Possible answers are: difficulty deciding, having to find inter-disciplinary career paths (e.g., bio-medical, medical engineering, counseling and computers). "

CLOSURE:

Say:

"Many of us underestimate our capabilities. However, when we believe in ourselves, we find that we can do just about anything that we are determined to do. We just need to take action.

Interest and skills voiced in elementary or middle school or even earlier performance or success do not have to limit us. We have more options.

The more we learn about ourselves and the world of work. the better we are able to make choices that lead to success."

PRACTICE:

Talent Search-

See how many of the following you can spot this week:

1. Woman working at a construction site
2. Man involved in child care
3. Woman doing a "man's job" (mowing the lawn, taking out the garbage, etc.)
4. Man doing a "woman's job" (cooking, laundry, grocery shopping, etc.)
5. A female M.D.
6. A male elementary school teacher
7. A female computer expert or engineer
8. A female attorney or principal
9. Any others....

SESSION SIX: Into Action-Being Myself In Every Situation

OBJECTIVES:

- •Identify assertive behaviors
- •Recognize that behavior does not have to depend on feelings
- •Identify options for acting differently.
- •Develop a non-judgmental self-appraisal for situations which require social, leadership, and authority-related skills.
- •Identify differences in competition vs. consensus situations

MATERIALS: List of Situations

PROCEDURE:

Begin by saying:
"In the last session we learned that our interests can be translated into capabilities if we take the action necessary to develop skills and mastery.
In the world of work, women are often expected to relate well to their peers as well as to authority figures and to exhibit leadership skills. "
"In this session we will discuss how judgments of ourselves often create feelings that affect our development. "
Say:
"For the next activity, we will explore the ways we relate in social situations, to authority figures, and in leadership situations."

Divide the girls into three groups of four girls.
Pass out the list "What Is Your Stress Level"?.
SAY: We will work in four groups of three. One of you can act as a recorder for the group. You are trying to come up with a group *consensus* about the stress level. You will have about ten minutes."

WHAT IS YOUR STRESS LEVEL???

LIST OF SITUATIONS

On a scale of 1-10 (1 is lowest; 10 is highest.), rank order in terms of stress/fear your feelings about the following situations. The group should come to agreement about the order.

GROUP I

A. Approaching authority figures:
1. A judge
2. A policeman
 e.g., It can vary:
 (You have a flat tire)
 (You have just been caught throwing a bottle at a plate glass window.)
 (The policeman stopped because you and some friends were painting "The Wall".
3. A teacher about a mistake about a nine-weeks grade
4. A boy who is sexually harassing you

GROUP II

B. Speaking to or mixing with others:
6. three students whom you met at a party last weekend
7. two students who look lost on their first day of school
8. your best friends at lunch time
9. a homeless person

GROUP III

C. Leading/taking charge:

13. with your little brother/sister, who wants to borrow your new shirt
14. with a boy who has a gun pointed at you

15. with 20 people who are threatening to break into and loot a building
16. after an automobile accident. You were one of the drivers in a four-car crash. Everyone is just standing around, in a daze, or injured and still in the car. There were no witnesses.

GROUP IV

D. Leading/taking charge:

17. working on a group project with Hillary Clinton, Hugh Grant, and Val Kilmer
18. working on a group project with the school principal, vice principal, president of student government
19. working on a group project with three very eager-to-please kindergarten students. They worship you.
20. in a group of three, you are asked to be a recorder.

PROCESSING:

Lead a discussion. Say:
"What happened in your groups? What difficulties did you have about coming to a consensus? How is working on consensus different from competition(emphasizing similarities rather than differences, feelings of cooperation rather than power or control, etc.)
What differences were there in the situations that helped you put them in an order?
What makes us act differently in uncomfortable situations ? (feelings of low self-esteem, unsure, etc., basically FEAR,
What is fear? (Expecting bad things to happen, especially of others' reactions to us, sometimes justified-the gun situation-sometimes not).)
How do we usually act when we are fearful (stressed, unclear-thinking) ? Do people read our minds? How would they know we are afraid? (They see only our behavior.)
How does a person learn to face an uncomfortable situation?
(Practicing new behaviors, acting as if they weren't afraid, etc.)

WHAT IS YOUR STRESS LEVEL???

LIST OF SITUATIONS

On a scale of 1-10 (1 is lowest; 10 is highest.), rank order in terms of stress/fear your feelings about the following situations. The group should come to agreement about the order.

GROUP I

A. Approaching authority figures:
1. A judge
2. A policeman
 e.g., It can vary:
 (You have a flat tire)
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19. working on a group project with three very eager-to-please kindergarten students. They worship you.
20. in a group of three, you are asked to be a recorder.

Can we act as if we weren't afraid? Is it insincere?

CLOSURE:

Say:

"We saw in this session that we can have control of our actions, even if we don't always have control of our feelings. The same clear thinking we experience in comfortable situations now is possible in less comfortable situations with practice. Even if we don't feel comfortable, we can act in ways we have learned which get us through the situations."

"We can feel comfortable in situations which require social skills, leadership skills, and skills in dealing with authority. All of the skills and practices we are learning today can help in similar situations in the world of work."

PRACTICE:

1. Make a point of talking to someone today that you have never talked to before, just for practice.

2. Make a point of talking to a teacher, principal, boss, or other authority figure today, just for practice.

3. Look at people or characters whom you think of as brave. How did they get that way?

SESSION SEVEN: The Big Picture

OBJECTIVES:

- •Identify job types that are related to skills and interests.
- •Identify jobs that fall into those types.
- •Identify next step for success in career preparation and choice.

MATERIALS NEEDED:

Handout-The People Environments
Handout-Party Job Lists
Handout-The 50 Top Occupations

PROCEDURE:

"In the last session we learned that the processes of consensus and competition are based on different values and require different skills. We also learned that we can develop skills for meeting and working with groups of people as leaders, as peers, or as followers. All of the skills and behaviors we learn can be choices whish will help us succeed in the world of work.
Today we will learn more about our interests and how those interests affect the people we prefer to be around and subsequently the work environment we might prefer."

THE PARTY

Say to the girls:

"Now we will do an activity which requires us to assess our interests and abilities. In order to do this exercise, we picture ourselves at a party with several groups of people. As at most social gatherings, the people group themselves according to what they have in common. Look at the p[apers I will give you and follow the directions. The idea is to choose a group or groups based on your abilities and interests. Make decisions disregarding shyness, money, moods, or what others might think."

Pass out the handout, three pages.

Direct the girls to choose a first, second, and third group of people and a first, second, and third letter from the six (RIASEC). Tell them that most people are a combination of types.
Allow about ten minutes for the girls to look over the handout. When the girls have finished, ask them to look at the next page at the list of jobs under each letter.

Say:

Look at the next page at the jobs listed by type. Some combinations are shown at the end of each list, for example, athletic coach is a combination of R(realistic) and S(social). Look at the types of jobs under your letters."
"Look also at the 1995 statistics for the 50 top occupations with figures for starting salary, median salary, typical top salary (after 12-14 years), ratio of men to women in the job, and information about some emerging careers in specific metropolitan areas. Look for the statistics for five jobs that interest you and fit in your "type".

PROCESSING:

Lead a discussion of what the girls found out about themselves.

Say:

" Now let's discuss what we learned. How does the identification of a type help to find possible job choices ? (Possible answers are: by putting jobs in categories, by giving a hint at what is required for the job, by identifying fields of interest that lead to discovery of other job possiblities, etc.) What did you learn about yourself? What did you learn about the world of work? What other things must be considered when choosing a career? (Possible answers: our own values, availability of the job, prestige, social influences, salaries, benefits, etc.)

CLOSURE:

Say:

"Today we looked at the types of choices we will be required to make as we choose possible careers. We looked at the types of choices required to prepare ourselves by training and education to be ready for those careers. We see that there are many things to consider in making career choices, including values, interests, abilities, status, social influences, salaries, and availability.

THE 50 TOP OCCUPATIONS

Here are the jobs with the brightest prospects.

The best job opportunities belong to analysts (of computers and organizations) or therapists (for minds and bodies), according to our exclusive ranking of the 50 occupations that will show the greatest percentage employment gains by 2005.

We surveyed professional and managerial fields that generally require at least a college degree; we excluded such jobs as secretary and security guard and trades like plumbing.

The figures in the first three columns at right will give you a sense of what you can expect to earn pursuing each career. They are based on data from the Economic Research Institute, a compensation specialist in Newport Beach, Calif. The starting salary is an average of what people are generally paid in their first year. The median salary

	Career (% increase expected by 2005)	Starting salary	Median salary	Typical top salary	Ratio of men to women	Tips and comments
1	**Computer systems analyst (79)**	$27,788	$38,821	$52,462	86/34	Those who understand how organizations work are in greatest demand.
2	**Physical therapist (76)**	19,168	25,807	34,375	22/78	Private practices are creating opportunities outside of hospitals and institutions.
3	**Operations analyst (73)**	20,521	29,854	50,047	57/43	Railroads and airlines are among the biggest employers.
4	**Psychologist (64)**	28,007	39,607	84,069	41/59	Worker training and computerized learning are hot specialties.
5	**Travel agent (62)**	14,250	23,817	37,583	40/60	Agencies that specialize in cruise bookings are expanding.
6	**Computer programmer (56)**	20,120	30,806	51,918	68/32	Businesses need programmers familiar with local area network technology.
7	**Occupational therapist (55)**	25,800	29,284	38,750	10/90	Experience treating back and repetitive motion injuries is valuable.
8	**Management analyst (52)**	18,147	30,992	110,600[2]	69/31	Many of these consultants serve as expert witnesses in business litigation.
9	**Respiratory therapist (52)**	27,814[1]	34,344	44,952	40/60	With gerontology experience you'll breathe easier about your future.
10	**Marketing, advertising or p.r. manager (47)**	23,281[3]	39,190	76,638	69/31	Having a thorough understanding of product development will promote your career.
11	**Hotel manager or assistant manager (44)**	32,283[4]	55,438	80,934	78/24	An ability to deal with benefits and personnel is a fast way in.
12	**Registered nurse (44)**	28,773	31,463	62,488	5/95	Nurses are needed at outpatient facilities and to treat patients at home.

(continued on next page)

is at dead center: Half the people in the field make more than that, half make less. The typical top salaries reflect the wages that someone would receive after eight to 12 years of service in that position. All these figures are based on national samples; there are considerable differences from region to region.

In the fifth column, you will find the ratio of men and women pursuing each career, as reported in the most recent Census. Despite the gains made by women over the past decade, striking imbalances remain in such male-dominated fields as engineering and architecture.

13	**Health services manager (42)**	45,723	51,677	91,361	33/67	Medical groups and clinics are looking for people with marketing skills.
14	**Broker/financial service representative (40)**	26,269[6]	27,432	42,770	71/29	Financial firms need people to sell retirement savings plans to employers.
15	**Accountant (34)**	20,366	30,314	50,765	48/52	Women now represent more than half the profession.
16	**Biologist (34)**	21,221	33,485	56,503	58/42	Funding for AIDS studies has created renewed demand for biomedical researchers.
17	**Counselor (34)**	13,365	16,669	34,962	39/61	In 36 states and D.C., drug, family and other counselors must now be licensed.
18	**Data processing manager[5] (34)**	26,752	45,938	67,066	80/20	Develop a specialty such as data-base management or telecommunications.
19	**Electrical/electronic engineer (34)**	28,047[6]	41,696	68,768	91/9	Designers of microprocessors for artificial intelligence applications are in demand.
20	**Lawyer (34)**	31,632[7]	51,111	121,718	61/19	The President, his wife and most of the Cabinet are lawyers.
21	**Physician (34)**	60,767[8]	110,573	266,220	80/20	Family practitioners will find it easier to start careers in HMOs or rural practices.
22	**Pilot (34)**	21,845	33,667	62,635	97/3	Two years as a flight instructor helps you qualify for high-paying airline positions.
23	**Property manager (34)**	30,676	51,684	74,697	54/46	Employers prefer that you have real estate sales experience as well as a college degree.
24	**Secondary school teacher (34)**	18,768	26,737	49,104	45/55	Mainstreaming of special-ed students makes special-ed training a plus.
25	**Social worker (34)**	13,797	17,943	33,169	31/69	Rural areas continue to need more of these professionals.

Excerpts* from "Where to Get the Best Jobs,' pp 169-173, by Jersey Gilbert. (The Top 50 Occupations - pp 170-171 and The 50 Top Job Markets - pp 172-173) from the April 1993 issue of MONEY.

THE 50 TOP OCCUPATIONS

Here are the jobs with the brightest prospects.

	Career (% increase expected by 2005)	Starting salary	Median salary	Typical top salary	Ratio of men to women	Tips and comments
26	Speech pathologist (34)	$19,851	$26,457	$45,239	12/88	Bilingual practitioners are especially sought after.
27	Construction or project manager (33)	28,797[10]	49,452	92,194	98/2	Look for jobs on industrial projects, and be prepared to relocate.
28	Human resources specialist (3...)	20,595	31,952	43,930	43/57	Small companies need people who know everything from benefits to job safety.
29	Restaurant or food service manager (32)	19,808	32,744	43,740	39/61	Requirements now include computer literacy at many establishments.
30	Visual artist (32)	23,814	28,960	51,488[10]	48/52	Be able to work with several graphics software programs.
31	Veterinarian (31)	29,591	41,847	77,120	73/27	The number of women vets has tripled since 1980.
32	Civil engineer (30)	29,123	41,188	68,227	94/6	Expertise in constructing pollution-control facilities will ensure employment.
33	Inspector/compliance officer (30)	15,697	22,419	39,966	77/23	The growth of government regulation creates boundless opportunity.
34	Adult education teacher (29)	15,718	22,192	39,360	60/40	Look for jobs at community colleges and mid-size companies.
35	Financial manager (28)	25,098[11]	42,284	81,106	55/45	Talk your way into the expanding global investing field with foreign language skills.
36	Interior or industrial designer (28)	18,875	27,275	46,830	47/53	Make sure your training fits the licensing requirements in your state.
37	Writer or editor (26)	12,930[12]	18,048	62,927	49/51	Technical writers have the best employment prospects.
38	Architect (24)	28,084	41,066	86,019	83/17	Historic restoration and building renovations are the hot specialties now.

(continued on next page)

Excerpts* from "Where to Get the Best Jobs," pp 169-173, by Jersey Gilbert. (The Top 50 Occupations - pp 170-171 and The 50 Top Job Markets - pp 172-173) from the April 1993 issue of MONEY.

11	**Architect (24)**	28,084	41,066	88,019	83/17	Historic restoration and building renovations are the hot specialties now.
12						
13						
14	**Insurance underwriter (24)**	19,967	28,863	48,963	38/64	Actuaries tend to get the highest-paying entry-level jobs.
15						
16	**Biochemical engineer (24)**	29,125	41,190	66,228	95/5	The three big specialties are robotics, robotics and robotics.
17	**Meteorologist/statistician (24)**	17,000[15]	27,300	38,000	6/94	Food-processing firms need help coping with new federal labeling regulations.
18						
19	**Project event coordinator (24)**	20,917	28,503	42,796	73/27	Best prospects are in industries like biotech, where the manufacturing process is evolving.
20						
21	**School administrator (24)**	29,830[14]	41,524	66,163	45/55	It helps if you have a background in business administration as well as education.
22						
23	**Administrative manager (23)**	28,057	41,920	68,833	42/58	Many are setting up their own firms to handle clerical work for large companies.
24						
25	**Employment interviewer (23)**	21,412	31,309	42,708	24/76	Agencies that supply temporary office workers need interviewers.
26	**Primary school teacher (23)**	19,440	28,935	48,912	12/88	The fastest-growing student populations are in blanket states.
27						
28	**Purchasing agent (23)**	18,481[16]	17,692	64,895	55/45	Telecommunications companies offer the best prospects for advancement.
29						
30	**Budget analyst (22)**	23,712	32,305	43,488	40/60	Besides accounting skills, you need the ability to make effective presentations.
31						
32	**Clerical supervisor (22)**	18,598	25,795	35,471	9/91	You usually need to start by doing the kind of work that you want to supervise.
33						
34	**Geologist (22)**	30,886	45,943	64,603	89/11	Consulting firms need ground-water experts to help plan cleanup projects.
35						

Sources: Bureau of Labor Statistics, Economic Research Institute. **Notes:** Top salaries do not reflect earnings of supervisors or managers unless otherwise noted. *BLS growth projections include scientific and engineering managers. †Starting salaries for therapy managers; other salaries are for therapy managers in consulting firms. ‡Salaries are for electrical engineers. §Salaries are for corporate lawyers. ¶Salaries are for general practitioners. **Salaries are for financial sales representatives. ††Salaries are for construction superintendents. ‡‡Salaries are for accounting managers. §§Starting and median salaries are for writers. ¶¶Starting salaries are for editors. ***Salaries are for MVO BLS data. †††Salaries are for principals and headmasters. ‡‡‡Starting and median salaries are for agents. §§§Salary is for purchasing managers. ¶¶¶Top salary is for commercial artists

Excerpts* from "Where to Get the Best Jobs," pp 169-173, by Jersey Gilbert. (The Top 50 Occupations - pp 170-171 and The 50 Top Job Markets - pp 172-173) from the April 1993 issue of MONEY.

As we become more aware of ourselves, we will be closer to success in choosing a career that is fulfilling. We can make choices now that prepare us for a range of careers in which we can be successful."

THE PARTY

1. During a party, you notice in each corner of the room different groups of people who seem to have much in common. After reviewing the groups, you decide which one in which you would like to participate.
2. After a while, everyone in the group you have chosen decides to leave. You have to choose another group, because you do not want to leave yet.
3. Again, the group leaves, and you must choose a third.

THE PARTY

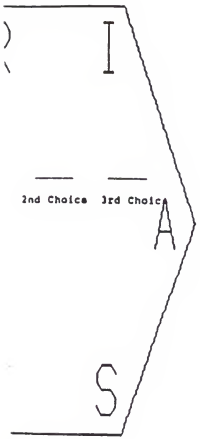
Realistic. People who like to work with machines, tools, plants, or animals. They have athletic or mechanical ability. Strengths: practical, athletic, modest, and frank. They are wearing jeans and a T-shirt. You might notice dirt under some of the fingernails. They talk about cars, go-cart races, the next soccer or football game, and the next fishing trip.

Conventional. People who like to work with information and numbers, have clerical and arithmetic ability--carrying things out in detail. Strengths: conscientious, efficient, orderly, and practical. They are talking about the latest in computer technology, Apple and IBM business, cruising the "Net", the high-tech graphics in "Batman Forever".

Enterprising. People who like to work with people to influence or persuade them; have reading and speaking ability. Strengths: self-confident, popular, sociable, ambitious. These people are well-groomed, neat, "together". Their talk is full of convincing someone else of the worth of something, projects they are doing, extra-curricular activities (especially student government), the "latest" of clothes and styles.



(A)



(B)

Artistic. People who like to work with ideas. They like to create things, have artistic, musical, or writing ability. Strengths: idealistic, independent, emotional, expressive. These people have long hair, sandals, often love-beads and tie-dye. They discuss new poetry, alternative music, and may be critical of anything mainstream. They talk about the way things should be, using lots of imagination.

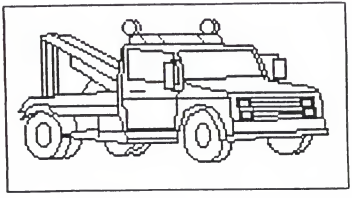
Social. People who like to work with people to teach or help them. They have social ability. Strengths: cooperative, helpful, idealistic, friendly. They may wear the latest in fashion, often as a conversation-starter. They are talking (all at the same time) about the party they were at last week or the one next week.

Investigative. People who like to work with ideas to solve problems. They have mathematical and scientific ability. Strengths: curious, independent, cautious, modest. They don't care about whether their appearance is pleasing to others. These people are probably trying to solve something: endangered species, the ozone problems, electric cars.

THE PEOPLE ENVIRONMENTS

People in a REALISTIC environment:

- like to work with tools, objects, machines, or animals.
- develop manual, mechanical, agricultural, and electrical skills.
- prefer jobs in which they can build or repair things.
- are usually down-to-earth people.



People in an INVESTIGATIVE work environment:

- like activities that lead to learning more about the biological and physical sciences.
- develop very good ability in math and science.
- prefer jobs in scientific and medical fields.
- are described as curious, studious, and independent.

People in an ARTISTIC work environment:

- like to feel free from scheduled routine so that time can be used for creative activities.
- develop skills in language, art, music, drama, and writing.

THE PEOPLE ENVIRONMENTS

People in a SOCIAL environment:

- like activities that involve informing, training, teaching, understanding, and helping others.
- develop ability to work with people.
- prefer occupations such as teaching, nursing, and counseling.
- like to be thought of as helpful and friendly.

People in an ENTERPRISING work environment:

- like activities that permit leading or influencing other people.
- develop leadership ability and persuasive and other important skills in relating to people.
- prefer jobs such as salesperson or manager.
- are ambitious, energetic, and self-confident.

People in a CONVENTIONAL environment:

- like activities that permit organization of information in a clear and orderly way.
- develop office and arithmetical skills.
- prefer jobs like preparing records, filing papers, typing letters, operating computers.
- like to be thought of as responsible and dependable.

THE PEOPLE ENVIRONMENTS

R

Carpenter, Builder, Electrician, Welder
Cook
Dry Cleaner
Forester
Gas Appliance Service Worker
Grounds Keeper
Heavy Equipment Operator
Kitchen Helper
Locksmith
Machinist
Maintenance Mechanic
Motion Picture Projectionist
Security/Safety/Law Enforcer
Service Station Attendant
Stunt Performer
Tailor
Truck Driver
(S) Athletic Coach
(S) Librarian
(S) Psychologist, Sociologist

A

Actor/Actress
Architect
Clown
Commercial Artist
Dancer
Director, Stage/Theater/Arts
Draftsperson
Fashion Designer
Interior Decorator
Interpreter/Translator
Jewelry Designer
Journalist/Reporter
Musician
Newspaper Editor
Photographer
Public Relations Worker
Technical Writer
(C) CPA
(C) Homemaker
(C) Phone Operator

E

Apartment Manager
Auto Dealer
Building Contractor
Buyer
Demonstrator
Food Service Manager
Funeral Director
Grocer
Importer-Exporter
Insurance Investigator
Labor Arbitrator
Lawyer
Lobbyist
Personnel Manager
Purchasing Agent
Real Estate Appraiser
Salesperson
(I) Airline Navigator
(I) Radio/TV Repairer
(I) Tester, Electronics

THE PEOPLE ENVIRONMENTS

I

Airline Pilot
Anthropologist, Arch., Historian
Asst. Metallurgist
Chemist
Computer Programmer
Geologist
Horticulturist
Instrument Repairer
Medical Lab Worker
Oceanographer
Pharmacist
Physician
Physicist
Public Health Microbiologist
Quality Control Tech
Tool Maker
Veterinarian
Zoologist
(E) Buyer
(E) Funeral Director
(E) Labor Arbitrator

S

Athletic Coach
Barber, Cosmetologist
Caterer
Child Day Care Worker
Clergy
Counselor
Dental Hygienist
Elementary Teacher
Food Service Manager
Foreign Service Officer
Home Economist
Hospital Attendant
Librarian
Licensed Practical Nurse
Physical Therapist
Recreation Worker
Social Worker
Speech/Hearing Therapist
(R) Bus Driver
(R) Nursery Worker
(R) Typewriter Repair

C

Bank Teller
Bookkeeper
Business Machines Operator
Cashier
CPA
Credit Manager
File Clerk
Homemaker
Library Asst.
Medical Record Tech
Proofreader
Receptionist
Secretary
Sewing Machine Operator
Stenographer
Stock Clerk
Timekeeper
Traffic Checker
Travel Bureau Clerk
(A) Draftsperson
(A) Photographer
(A) Radio/TV Announcer

PRACTICE:

Think of women or men who are happy in their careers, or interview them. How did they choose their career? Did they get help in making a decision? Did they end up with the career they planned in the ninth grade? Why or why not?
Research says that many women "drift" into a career rather than make a conscious choice. What can you do to prevent that happening to you?

SESSION EIGHT: Career Bingo And Puzzle

ACTIVITY ONE

OBJECTIVES:

- Identify facts about the world of work.
- Identify facts about heroes.

MATERIALS:

Game-Career Development Bingo

PROCEDURE:

Say:

"In the last session we learned that young women can learn skills for situations that are social, leadership, and authority-related. Comfort in new situations requires practice."

"In this session we will practice with information about the world of work and about women heroes."

Play Bingo. One relevant word denotes the phrase, read by the leader. For the heroes, the woman's name is read and appears on the card. Five covered in a row vertically, diagonally, or horizontally, wins.

The player who wins calls, "Bingo!"

Allow 15-20 minutes to play the game.

At the end of the time, say," Please gather up your game pieces and return to the large circle.

ACTIVITY TWO:

OBJECTIVES:

Practice with facts from the world of work

Practice with facts about women heroes

MATERIALS:

Career Development Crossword Puzzle

PROCEDURE:

Divide the girls into three groups of four. Hand out the puzzle to the "starter" of each group.

Give directions:
"Each group will try to complete the crossword as a group project. One person will read the prompts and record for the group. You will have about ten minutes. "
At the end of ten minutes, say:
"Your time is up. Please stop."

PROCESSING:

Say:
"If you could give one statement about women in the world of work, what would it be?"

Pause for responses.

CLOSURE:

Say:
"You have had a review of knowledge about the world of work and about women heroes who are role models in achieving success. You are more aware at this time of messages, of obstacles, and of characteristics needed to achieve your dreams."

WORLD OF WORK/HEROES

CROSSWORD

PUZZLES I & II

STATEMENTS

Following is a list of statements about knowledge of world of work and for heroes.

DIRECTIONS

Important: At first, read the whole statement. Then, go back and read the bold phrase. The phrase will match the phrase on a square of the players' cards.Pause. Players put an "X" on the square with the phrase called.

The players will then have to listen for the fact as well as listen for the particular phrase that matches. The winner is the first player to "X" out five-in-a-line on hjer sheet. The leader checks the phrase as it is read. Thus, as a winner reads the phrases on her sheet, the leader has a means of verifying that the phrase was actually one of those read.

To begin a new game, simply hand out a new sheet to each player.

BINGO-WOMEN

1. There are more women in the field of accounting working as bookkeepers than men. However, only 50% of partners in accounting firms are women. What is this called? (**Glass ceiling**)

2. Did you know that Harvard, Princeton, Yale **medical schools** admitted more women than men for the first time in Fall, 1994?

3. Did you know: Women flew and built **fighter planes** in WWII?

4. Women have created a new leadership style that is not based on competition. The authors of Megatrends for Women (1992) stated that women make good bosses and owners of businesses because they admit they need help, they surround themselves with good people, and they have good attitudes about team building and consensus, which are all attitudes more geared to **growth stages** than most men's leadership styles.

5. Did you know that the U.S. (according to the Bureau of Labor) will need 600,000 new managers and top executives between 1990 and 2005? In 1988 women owned 5 million businesses with revenues of **$83 billion dollars**.

6. A larger percentage of women is entering the work force and a **lesser** percentage is being promoted to higher levels .

7. Women are working longer, more hours, and are spending less time in their homes involved in **child care.**

8. Almost one-half of the present work force in 1995 are women.

9. A **married** woman today can expect to work for 25 years.

10. A **single** woman can expect to work for 45 years.

11. **Inequities** exist for women in comparison to men in education and training, access to positions, promotion.

12. The greatest increase in higher paying jobs between now and the year 2000 will be in those requiring math and science (36%).

13. Females earn consistently **less than** men in equal positions.

14. Females earned about **75%** of what men earned in 1992.

15. Women are still the primary caregivers for **children and elders.**

16. The majority of women who are employed are still employed in low-paying, "dead end" jobs and in **traditional** occupations in which the majority are females.

17. **Female-headed** households have the lowest median family income.

18. Career **undershooting** is the tendency to have a low level of occupational aspiration, in spite of having the ability.

19. **Lowered** career aspirations have been attributed to occupational stereotyping, childhood conditioning, sex stereotyping of jobs,low self-esteem, and low expectations of success.

20. The "women's liberation movement", combined with **governmental** mandates against discrimination on the basis of sex have influenced increased entry and success of women in training, education, and in the world of work.

21. Sex desegregation has increased on the whole, except in the **engineering** fields, but mostly in the occupations in which men are paid less, and the number of workers is declining.

22. The **Glass Ceiling Report** (U.S. Department of Labor) is thought to have increased hiring and promotion of female executives for only a short period.

23. The Equal Employment Opportunity Commission (EEOC) published guidelines making sexual harassment in the workplace **illegal.**

24. **A "hostile atmosphere"** in terms of sexual harassment is illegal in both work and educational settings.

25. Inequities for women may exist in **income and promotion** rates, but also in opportunities for training, social interaction, and other informal "gateway" activities.

26. Girls are often encouraged to be conforming and dependent in their early years, which helps them in school. In later years, however, skills of **assertiveness** and independence are very useful.

27. Adolescent females show a bigger **drop** in self-esteem and aspirations, as compared to boys.

28. Girls' lower aspirations are influenced by gender bias in the schools, especially in a lower quality and amount of **classroom attention.**

29. Sexual stereotyping of boys and girls begins as early as early **play years.**

30. Sex role stereotypes include the belief that men and women should have different **roles** at home and at work.

31. Girls have fewer **role models** of success and achievement in careers than boys.

32. Girls tend to view male-dominated occupations, especially those in math and science-related fields, as beyond their **ability.**

33. In 1972, the federal government made sex discrimination in schools illegal through **Title IX.** 34. Cases in sex discrimination in employment are filed through the Equal Employment Opportunity Commission **(EEOC).**

35. The **"glass wall"** describes the division of college campuses into separate channels for men and women into different educations leading to separate and unequal futures.

36. In 1970, only 9 per cent of **medical students** were women. In 1994, 39 per cent were women.

37. 43% of **law students** today are female. 30 years ago, less than 4% were women.

38. Dr. Bernadine Healy was the first woman **director of NIH,** the National Institutes for Health.

39. She was the first woman inducted into the **Inventors' Hall of Fame.** She is known for her work in developing drugs to fight leukemia, AIDS, septic shock and tissue rejection: Gertrude Belle Elion.

40. She is the first woman and the first Hispanic to be named **surgeon general** of the United States: Antonia Novella.

41. She was the **first American woman doctor:** Elizabeth Blackwell.

42. She was the first female athlete to earn more than $100,000.00 in a single year: **Billie Jean King.**

43. Physically challenged by polio, she made intravenous therapy safe, was first to isolate the tuberculin agent, and helped to develop the **first tuberculosis screening** for worldwide use: Florence Seibert.

44. She jointly developed the **cotton gin,** although Eli Whitney usually is given credit: Catherine Littlefield Greene.

45. She **discovered DNA,** the basic building block of life, although credit is usually given to someone else: Rosalind Franklin.

46. She was arrested for trying to vote in the November, 1872 general election: **Susan B. Anthony.**

47. She was the first female member of the president's cabinet, becoming secretary of the **U.S. Department of Labor** in 1932: Francis Perkins.

48. A Quaker, she helped organize the **first women's rights convention** in 1848, held in Seneca Falls, N.Y. : Lucretia Mott.

49. She personally led more than 300 slaves to freedom: **Harriet Tubman.**

50. She was the first American-born Roman Catholic saint: **Elizabeth Seton.**

51. She was the first female attorney to present a case before the Supreme Court, and was the **first woman presidential candidate**-in 1884- with the backing of a political party: Belva Lockwood.

52. She was the first American-born woman to win a **Nobel Prize in medicine:** Barbara McClintock.

53. She discovered **penicillin,** although someone else is usually given credit: Elizabeth Stone.

54. She was the first female jockey to win a **Triple Crown event:** Julie Crone won the Belmont Stakes aboard Colonial Affair in 1993.

55. She was the first African-American millionaire: **Sarah Breedlove.**

56. **First justice of the peace,** in 1870, she was the first female to hold public office: Esther Morris Cabin.

57. Marie Curie (1867-1934) became the first woman to win the Nobel Prize in science and the first to win **two Nobel Prizes,** and working with her husband discovered radium.

58. Grace Murray Hopper (1906-1992) did pioneering work to make computers user-friendly. She developed the first language that allowed computers to talk to each other, COBOL.

59. Helen Brooke Taussig (1898-1986) developed surgery to save **"blue babies"** who otherwise often died soon after birth. She worked to require stricter government control on experiemtnal drugs, including stopping the distribution of thalidomide which, when taken by pregnant women caused "seal-limb" birth defects in their babies.

60. Eugenie Clark (1922-) earned the name **"shark lady"** for her extensive research on sharks, but also on glow-in-the-dark fish, fish that change sex in seconds, and other oddities.

61. Maria Goeppert Mayer (1906-1972) won the **Nobel Prize** for her "shell theory" of nuclear physics and went on to work on the project that developed the atomic bomb.

62. Chien-Shiung Wu (1912-) disproved a law of physics that was widely accepted. She worked on the **Manhattan Project** to build the atomic bomb, and was the first female professor at Princeton University.

63. Barbara McClintock (1902-1992) won the Nobel Prize in medicine/physiology for her work in **plant genetics.** She was known as a feisty and fun-loving woman, who quit one faculty because they were "awful" to women.

64. Florence Nightingale (1820-1910) turned down two marriage proposals and left home to work as a nurse in the Crimean War, pioneering nursing as a respectable career for women, and was the first to use **statistics** to look at health problems of whole populations.

65. Rachel Carson (1907-1964) wrote **Silent Spring,** a book that shattered people's belief that industrialization was not ruining the environment.

66. Gertrude Belle Elion (1918-) developed successful drug treatments for **cancer**, other diseases, and kidney transplants, winning the Nobel Prize for medicine. She had decided at age 15, seeing her grandfather die horribly of cancer, that she would do something about it.

67. Vera Cooper Rubin (1928-) made discoveries in **astronomy** that dramatically changed scientists' views, including showing that as much as 90% of the universe is made of invisible matter.

68. Susan B. Anthony (1820-1906) led the women's suffrage (**voting rights**) movement at a time when only white males could vote. She also was among the first to demand the right of African Americans to vote.

69. Jane Addams (1860-1935) was a co-winner of the 1931 Nobel Peace Prize for her life's work in promoting peace and humane living conditiond for all people. She studied slums in Eurpoe, then founded **Hull House**, a famous first settlement for the poor in Chicago.

70. Toni Morrison wrote Beloved and Sula, novels based on the African-American experience, and won both the **Nobel and Pulitzer** prizes for literature.

71. Maya Angelou is a writer of poetry , including reciting her poetry at Bill Clinton's presidential inauguration.

72. Dorothy Parker (1893-1967) was a pioneer in **journalism** at a time when the field was dominated by men.

73. Golda Meir helped establish the Jewish nation of Israel in 1948, uniting factions by serving as leader of the Labor Party, as foreign minister, and as **prime minister** of Israel.

74. Margaret Thatcher became England's first female prime minister in 1979. She headed the Conservative Party, longtime opponent of women's right to vote, and earned the nickname **"Iron Lady"**.

75. Marian Wright Edelman, an attorney and African-American activist, founded the Children's Defense Fund to promote **children's issues** in national politics.

76. Janet Reno (1938-) is serving as the first female **attorney general** of the United States, the top law enforcement official in the country.

77. Martina Navratilova defected from Czechoslovakia to the U.S., and went on to establish herself as one of the greatest women tennis players of all time. Her "powerhouse" serve has been clocked at **93 m.p.h.** She won Wimbledon a record nine times.

78. Tracy Caulkins (1963-) won **three Olympic gold** medals, set five world records, and won 48 national titles in swimming. She attended the University of Florida.

79. Eva Peron (1919-1952) rose from a poor background to become the most powerful and beloved woman in **Argentina**. As a partner with Juan Peron, she championed the causes of workers, women's rights, and the poor.

80. Indira Ghandi (1917-1984) governed India, the world's second largest country, twice as prime minister.

81. Mother Teresa (1910-) was awarded the Nobel Peace Prize for her work among the poor of India. She was a geography teacher in Yugoslavia before founding the order that is now active worldwide.

82. Sandra Day O'Connor (1930-) is the first female U.S. **Supreme Court Justice.** Before her present position on the Supreme Court, she was an attorney, a state senator in Arizona, and a state appeals court judge.

83. Jeanne Kirkpatrick (1926-), political science professor, author, and foreign policy analyst, has also served as U.S. representative to the **United Nations.**

84. Julia Morgan (1872-1957) designed more than **700 buildings** and was a trail blazer who opened the field of architecture to women. She designed the Hearst Castle in California.

85. Benazir Bhutto (1953-) became the first female head of an **Islamic** nation when she became prime minister of Pakistan in 1988. She studied at Radcliffe and Oxford. Her father was in prison, her brothers exiled, as she opposed the military dictator and became leader of the Pakistan People's Party.

86. People who are **interested** in the same things tend to work in the same types of jobs.

87. In 1991, women **nurses** earned more money than non-entrepreneurial female physicians. The United States needs 767,000 more nurses by 2005.

88. In 1994, there was a shortage of 17,000 **pharmacists**, and the figure is expected to double in the next 15 years.

89. The big growth industries-finance, health care, technology-- and many smaller niches, from carpentry to catering to the arts , represent key areas for the entrepreneur who wants to be a **CEO** (chief executive officer), today.

90. Florence Arthaud became the first woman to break the world record for a **transatlantic** crossing in 1990.

91. Isabelle Autissier was the first woman to complete a solo round-the-world voyage. D. She said that the bigger the boat and the longer the race, the easier it is for a woman to win, because ".. .you use more of your **brains**."

92. Since Title IX. the 1972 law forbidding sex discrimination in schools that get federal funding, the number of high school girls in interscholastic sports has increased by **500%**.

93. Sports build leadership skills that make women stand out in middle management and catapult into the executive suite. What better way, say the authors of Megatrends for Women, to prepare for **leadership** than to
1) confront fear, 2) challenge the body's resources, and 3) master disciple and risk-taking.

94. Fiona Biggs, manager of the 25 million dollar Dreyfus Strategic World Investing Fund, outpaced competitors world wide. Her firm was ranked number one among **global funds**.

95. Best long-term performance of a woman-run fund was Elizabeth Bramwell, manager of **Gabelli Growth**. It increased in value 144% between 1987 to 1991.

96. Patricia Cloherty runs New York's Patricof & Company, and is the first woman on the board of the National **Venture Capital** Association.

97. Susan Webb is president of her own consulting company, Pacific Resource Development Group, Inc., specializing in **sexual-harassment** issues. Sexual harassment, according to Susan Webb, costs firms money, and it is defined as "deliberate, and/or repeated sexual or sex-based behavior (including, of course, remarks) that is not welcome, asked for, or returned."

98. Karen Behnke formed her own company, Execu-Fit Health Programs, which designs, markets, and delivers **health programs** to corporations. In 1991 she sold the business, remaining as president, and manages the business for over 100 firms.

99. In 1992, **women-owned businesses** were projected to surpass the Fortune 500 companies in numbers of people employed, most of them in the United States.

100. Race-car driver Lyn St. James was the first woman to win the International Motor Sports Association Camel GTO series. She holds 21 speed records. Her lap speed of 212.5 miles per hour is the women's record. When people exclaim in disbelief that a woman can go **212 m.p.h.**, she tells them, "You see, the car doesn't know I am a woman."

101. **Margaret Mead** (1901-1978) made a name for herself and anthropology by documenting practices in other cultures such as New Guinea, that broke stereotypes for women, families, and children.

102. **Margaret Bourke-White** (1904-1971) photographed the world's foremost newsmakers, excelling in a field dominated by men at the time. She used her camera in an entirely new way to tell the stories of industry and war (Stalin, Ghandi, the mines of South Africa, and the Nazi concentration camps). She was the first to write social criticism with a lens and was a war correspondent for the Air Force.

103. **Dorothea Lange**'s photographs of the Depression roused the conscience of the nation with her images of suffering. Dismissed by critics, her influence is felt on the style of photojournalism today.

104. **Georgia O'Keeffe** (1887-1986) painted vivid scenes of the Southwest. Her originality placed her works in the nation's top museum.

105. Simone de Beauvoir (1908-1986) was among the leading figures of **existential philosophy**, and won awards for her novels.

106. Eleanor Roosevelt, although a First Lady, stood on her own as an outspoken advocate for peace and for women. She became a symbol of womanly strength, as a **pacifist**, feminist, diplomat and journalist.

107. Kay Koplovitz (1946-) became president and chief executive officer of **USA Network**. She loved negotiating deals, and USA was the first advertiser-supported basic cable service in the U.S. She negotiated the first contracts to show major league baseball, NBA basketball, and the National Hockey League.

108. Paula Stringer (1958-) dropped out of college to marry and raise a family. She later began a career in real estate with no prior business experience. In three years, she opened her own company, which became one of largest **real estate** companies in Dallas. When she sold it to Merrill-Lynch, it had 20 offices and 500 agents.

PRACTICE:

Stereotypes can influence the decisions women make. Think about these fears women often have. Upon what are they based ?

1. I am less of a woman/mother if I am not in the home.
2. Women are not really competent.
3. I am not feminine if I am earning a good living and have a great career.
4. I will experience social rejection and role strain (trying to be mother, wife, and career person, e.g.)
5. Excellence has its own burdens and stresses.
6. Success is highly overrated. Of what value is it?
7. I can't put "all of my eggs in one basket".
8. There is a lot of anxiety. I am afraid I will fail.

W	O	M	E	N
700 buildings	"blue babies"	attorney-general	Argentina	traditional
93 mph	$83 billion	astronomy	statistics	212 mph
"Iron Lady"	"Shark Lady"		36%	ability
illegal	lesser	nurses	assertiveness	engineering
EEOC	governmental	leadership	pharmacists	drop

W	O	M	E	N
cancer	roles	Glass Ceiling Report	1st women's rights convention	United Nations Rep
director of NIH	Inventor's Hall of Fame	women-owned businesses	income & promotion	1st TB screening
3 Olympic Golds	2 Nobel Peace Prizes		Nobel Prize: Medicine	U.S. Dept. of labor
Billie Jean King	children & elders	people, data, things	transatlantic	C.E.O.
COBOL	Susan B. Anthony	Margaret Bourke-White	1st justice of the peace	Supreme Court Justice

W	O	M	E	N
Nobel & Pulitzer	first American woman doctor	growth stages	lowered	Elizabeth Seton
fighter planes	Dorothea Lange	children's issues	classroom attention	female-headed
existential philosophy	Silent Spring		surgeon general	Manhattan Project
less than	cotton gin	penicillin	Harriet Tubman	health programs
Glass Wall	Glass Ceiling	global funds	law students	Indira Ghandi

W	O	M	E	N
Gabelli Growth	Georgia O'Keefe	hostile atmosphere	Hull House	single
Sarah Breedlove	discovered DNA	journalism	child care	one-half
plant genetics	75%		Islamic	brains
undershooting	married	play years	Nobel Prize	Venture Capital
role models	voting rights	Triple Crown	Title IX	500%

W	O	M	E	N
Islamic	drop	journalism	lesser	leadership
governmental	nurses	married	75%	500%
36%	inequities		EEOC	penicillin
illegal	ability	pharmacists	undershooting	statistics
cancer	roles	COBOL	C.E.O.	astronomy

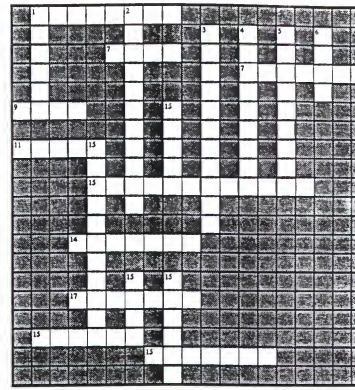
WORLD OF WORK/HEROES

CROSSWORD

PUZZLES I & II

World of Work/Heroes

B. Pepper 9-5-95



Across

1. Grace Hopper invented a way for a _____ to talk to another computer.
7. Women are spending less time doing this than ever.
8. Susan B. _____ was arrested for trying to vote in 1872.
9. Adolescent females often show a _____ in self-esteem.
11. Marie _____ won 2 Nobel prizes in science, discovering radium with her husband.
13. Absence of women in higher levels of management.
14. ____ schools just admitted 39% women (only 9% in 1970).
17. Sex bias was declared illegal through this act.
18. Women earn consistently _____ than men in equal positions.
19. Women are till primary caregivers for children and _____.

Down

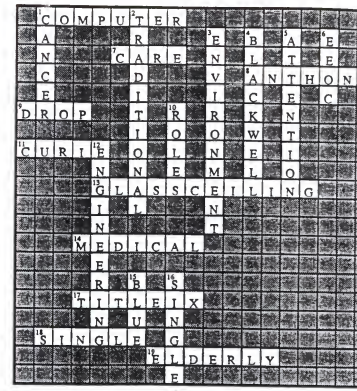
1. Gertrude Elion developed drug treatments for it after her grandfather died of it.
2. Occupations in which the majority are females are called ____.
3. Rachel Carson wrote a book exposing the harmful effects of industry on the ____.
4. Elizabeth _____ was the first woman doctor.
5. Girls receive a lower amount and quality of classroom _____.
6. Cases in sex discrimination are filed through this Commission.
10. Sex role stereotypes include the belief that men and women should have different _____.
12. An example of a field in which sex desegregation is hardly occurring.
15. Helen Taussig developed a way to save "_____ babies" who otherwise died sooon after birth.
16. _____ women can expect to work 45 years.

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World of Work/Heroes

B. Pepper

9-5-95



Across

1. Grace Hopper invented a way for a ____ to talk to another computer.
7. Women are spending less time doing this than ever.
8. Susan B. _____ was arrested for trying to vote in 1872.
9. Adolescent females often show a _____ in self-esteem.
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13. Absence of women in higher levels of management.
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18. Women earn consistently _____ than men in equal positions.
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Down

1. Gertrude Elion developed drug treatments for it after her grandfather died of it.
2. Occupations in which the majority are females are called _____.
3. Rachel Carson wrote a book exposing the harmful effects of industry on the ____.
4. Elizabeth _____ was the first woman doctor.
5. Girls receive a lower amount and quality of classroom _____.
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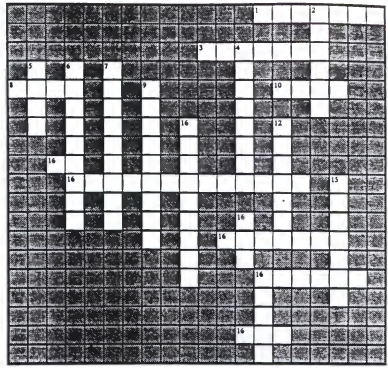
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CrossPuzzler

World of Work/Heroes II

B. Pepper

9-5-95



Across

1. First woman & Hispanic to be _____ general: Antonia Novella
3. A _____ atmosphere in terms of sexual harassment is illegal in both work and educational settings.
8. Jane Addams won the Nobel Prize for her work in the slums, where she built ____ House.
10. Billie Jean _____ was the first female athlete to earn $100,000 in a single year.
13. Florence Seibert developed the first __ screening for worldwide use.(2 letters)
14. Fastest-growing employment of women
17. Governmental ____ have helped to lessen discrimination for women.
18. A subtle way to discriminate is to prevent women from _____ interaction that leads to networking, etc.
19. Rosalind Franklin discovered ___, the basic building block of life.

Down

2. Really invented the cotton gin: Catherine Littlefield _____.
4. Susan B. Anthony led the fight for women's ____, or the right to vote.
5. Toni Morrison wrote _____, among other works, and won both Nobel and Pulitzer Prizes.
6. ____ Seton, the first American-born Roman Catholic saint
7. Chien-Shiung Wu worked on the _____ Project to develop the atomic bomb.
9. People who have the same ____ tend to work in the same type jobs.
11. Eugenie Clark did much work with sharks and marine life, earning the name "____ ____" (2 words).
12. _____ women can expect to work for 25 years.
15. Sexual harassment in the workplace or in schools is _____.
16. 43% of ___ students today are women compared with 4% 30 years ago.
18. Elizabeth ____ was the discoverer of penicillin.

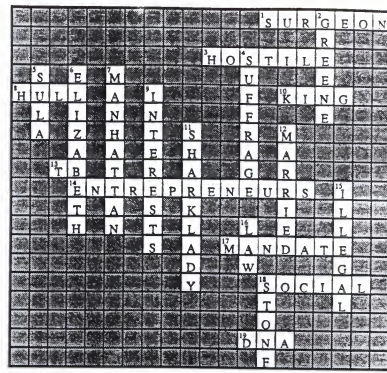
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CrossPuzzler

World of Work/Heroes II

B. Pepper

9-5-95



Across

1. First woman & Hispanic to be _____ general: Antonia Novella
3. A _____ atmosphere in terms of sexual harassment is illegal in both work and educational settings.
8. Jane Addams won the Nobel Prize for her work in the slums, where she built ____ House
10. Billie Jean _____ was the first female athlete to earn $100,000 in a single year.
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Down

2. Really invented the cotton gin: Catherine Littlefield ____.
4. Susan B. Anthony led the fight for women's ____, or the right to vote.
5. Toni Morrison wrote _____, among other works, and won both Nobel and Pulitzer Prizes.
6. ____ Seton, the first American-born Roman Catholic saint
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12. ____ women can expect to work for 25 years.
15. Sexual harassment in the workplace or in schools is ____.
16. 43% of ___ students today are women compared with 4% 30 years ago.
18. Elizabeth ____ was the discoverer of penicillin.

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CrossPuzzler

SESSION NINE: Affirming Our Strengths

OBJECTIVES:

- •Identify strengths and areas of possible improvement related to jobs.
- •Identify sources of support.
- •Identify fantasy jobs.

MATERIALS:

Pencil and paper

PROCEDURES:

Begin by saying:
"In this session we will learn more about our strengths, possible areas of improvement, and identify sources of support and possible jobs."

While the girls are in a circle of twelve, ask them to put three things on the paper.

Say:
"Now we will begin by putting three things on the paper:

1. The symbol of a job that you would choose if you didn't have to think about training or money.
2. The name of a person who thinks you could make this happen.
3. One skill you would have to improve upon to get that job.
4. One thing you hope to get out of a job other than money."

Ask the girls to then divide into groups of four to share their four ideas. Allow about 12-15 minutes to share.

Lead a discussion. Ask the girls what they learned and how they felt about sharing this information. Were any of

the strengths repeated by other members of the group ? Were any of the skills mentioned for improvement repeated? What steps would they take to improve the skill?
What are some of the values revealed in naming something other than money a woman can get out of a job?

Then, ask the girls to take turns doing a Strength Bombardment. One girl is the focus, and the others then name three strengths that she possesses that they feel will help her get the job. Allow about ten minutes for all of the girls to take a turn as the focus of attention.
After ten minutes,
SAY: "The time is up, please return to the large group."
Ask the girls to meet back as a large group.

PROCESSING:

Lead a discussion. Say:
"What was it like to learn about yourself today? To be the focus? What did you learn about yourself? About the world of work?"

CLOSURE:

Say:
"In these sessions we learned about ourselves and the world of work. We learned about messages and how our feelings and actions can help us when we decide either to accept the messages or reject them. We learned about sour strengths and areas we can improve and develop. We learned that we can and will be successful, because we know how to take charge and prepare for success."

OVERHEADS

Knowledge of the World of Work/Heroes

Rachel Carson (1907-1964) wrote Silent Spring, alerting people everywhere that modern industrial civilization was **ruining the natural environment** that sustains all life. That idea is commonplace now, but in 1962 it hit the public with earthshaking impact.
Carson, a **biologist**, wrote best-selling books on sea life before writing Silent Spring. She died of cancer two years after its publication.

Inequities exist for women in comparison to men in education and training, access to
positions, promotion.

The greatest increase in higher paying jobs between now and the year 2000 will be in those requiring math and science (36%).

Females earn consistently **less than** men in equal positions.

Females earned about **75%** of what men earned in 1992.

Women are still the primary caregivers for **children and elders**.

Gertrude Belle Elion (1918-) developed successful drug treatments for cancer, other diseases, and kidney transplants. She won the **Nobel Prize** for medicine in 1988. The summer she graduated from high school, at age 15, Elion's grandfather died "horribly" of cancer. She decided "that **maybe I could do something** about it," so she studied chemistry in college.
Women rarely received scholarships or got jobs in chemistry, so Elion worked her way through graduate school as a food analyst testing a company's pickles and jams and taking classes nights and weekends.

Knowledge of the World of Work/Heroes

Vera Cooper Rubin (1928-) has made discoveries in astronomy that have dramatically changed scientists' views of the universe. Her work has shown that as much as 90 percent of the universe is made of invisible matter. Her parents realized that her interest in the night sky was serious, and her father built a telescope for her when she was **fourteen** years old.

The majority of women who are employed are still employed in low-paying, "dead end"jobs and in **traditional** occupations in which the majority are females.

Female-headed households have the lowest median family income.

Career **undershooting** is the tendency to have a low level of occupational aspiration, in spite of having the ability.

Lowered career aspirations have been attributed to occupational stereotyping, childhood conditioning, sex stereotyping of jobs, low self-esteem, and low expectations of success.

The "women's liberation movement", combined with **governmental** mandates against discrimination on the basis of sex have influenced increased entry and success of women in training, education, and in the world of work.

Knowledge of the World of Work/Heroes

Amelia Earhart, (1897-1937) was a social worker turned **pilot.** On June 18, 1928, became the first woman to pilot a plane across the Atlantic Ocean and, four years later, the first woman to fly solo across the Atlantic in a 13-and-a-half-hour flight that set a new record.
Earhart wrote accounts of her flying adventures and was **aviation editor** of Cosmopolitan magazine and **vice president of two airlines**. She, her navigator and their plane disappeared over the Pacific Ocean near the end of an around-the-world flight.

Georgia O'Keeffe (1887-1986) painted vivid scenes of the desert **Southwest** that strike the eye and imagination. The originality of her work, such as her bold studies of desert flowers, earned her an honored place in American art and the nation's top art museums. O'Keeffe remained active into her **nineties.**

Sex desegregation has increased on the whole, except in the **engineering** fields, but mostly in the occupations in which men are paid less, and the number of workers is declining.

The **Glass Ceiling Report** (U.S. Department of Labor, 1991) is thought to have increased hiring and promotion of female executives for only a **short** period. In 1993, businesses were invited to a Congressional follow-up meeting. Only three businesses showed up.

The Equal Employment Opportunity Commission (EEOC) published guidelines making sexual harassment in the workplace **illegal.**

A **"hostile atmosphere"** in terms of sexual harassment is illegal in both work and educational settings.

Inequities for women may exist in **income and promotion** rates, but also in opportunities for training, social interaction, and other informal "gateway" activities.

Knowledge of the World of Work/Heroes

Margaret Mead (1901-1978) made a name for herself and anthropology through her travels, often to little-known places around the world, to study how people live in groups. Her work studying isolated peoples **challenged stereotypes** of men, women, and families.

Girls are often encouraged to be conforming and dependent in their early years, which helps them in school. In later years, however, skills of **assertiveness** and independence are very useful.

Adolescent females show a bigger **drop** in self-esteem and aspirations, as compared to boys.

Girls' lower aspirations are influenced by gender bias in the schools, especially in a lower quality and amount of **classroom attention**.

Sexual stereotyping of boys and girls begins as early as early **play years**.

Sex role stereotypes include the belief that men and women should have different **roles** at home and at work.

Girls have fewer **role models** of success and achievement in careers than boys.

Maya Angelou writes poetry that has won wide recognition and earned her an invitation to read her work at Bill Clinton's presidential **inauguration**. Angelou writes for a wide audience, including poetry for the film "Poetic Justice", in which she made a cameo appearance.

Dorothy Parker (1893-1967) was a sharp-witted and often sharp-tongued writer who gained fame in the world of **journalism** that, when she started out, was inhabited overwhelmingly by men.

Knowledge of the World of Work/Heroes

Golda Meir helped establish the Jewish nation of Israel in 1948, and she served as a leader of its Labor Party and as Israel's foreign minister and then **prime minister.**

Girls tend to view male-dominated occupations, especially those in math and science-related fields, as beyond their **ability.**

In 1972, the federal government made sex discrimination in schools illegal Through **Title IX.** Sex bias was outlawed in school athletics, career counseling, financial aid, medical services, admissions practices, and the treatment of students. Title IX violators were threatened with the loss of federal funds.
However, between 1972 and 1991 no school lost a single dollar of federal funds because of sex discrimination.

Cases in sex discrimination in employment are filed through the Equal Employment Opportunity Commission **(EEOC).**

The **"glass wall"** describes the division of college campuses into separate channels for men and women into different education, leading to separate and unequal futures. So far, the "hard sciences" are on the male side, for example, and "soft sciences", humanities, and education. This applies to students and to faculty, for the most part.

INTRODUCTION TO :

SELF-DIRECTED LEVEL

BABY DOLLS TO BOARDROOMS

You have been chosen to play a very important part in the current study. Thank you for your willingness to participate.
You are to look at and answer the questions in either a journal form or thinking about them on your own.
Please do not discuss your answers with anyone else until the study has been completed.
You will receive one section each week for eight weeks. Your guidance counselor will let you know how she will supply the sections to you.

Name _____ 1st period teacher _____

SESSION ONE: "Sugar And Spice" And "Puppy Dog Tails"

Objectives:

- To introduce the unit
- Identify some sex role stereotypes
- Identify messages that affect career success and choices

Materials Needed:

Slips of paper and pencils or pens

This is the first of 8 sessions. We will be looking at some important issues which face young women in our society. Some concerns and issues may be familiar to you. However, it's time to take a new look at them, to identify the ways that they affect us, and what we can do about them. We will be sharing ideas and challenging opinions, as well as examining some hard facts.

Today women are entering the world of work in greater numbers than ever before. They have the chance to earn more and achieve more than ever before. They have more choices available. In this session, we will learn about and discuss some things to make those choices more available.

First, we will do an activity that shows how messages affect our behavior and feelings about ourselves. Think of an example of something you have done and are proud of or are pleased with.

Think also of people who learned about the accomplishment and how they reacted. What were your feelings? What did others do or say?

List your feelings and other's behavior. Is it hard to share your accomplishments with others? Why?

Possible reasons might be: Fear of rejection or seeming boastful, fear of others' emotions such as jealousy, snubbing, one-upping, taunts, fear of going against the "traditional" woman image (passive, protected from risk, not competitive,

putting others first to the detriment or deferment of self, etc.). Were any of the things you listed similar?

Did you know that: One way boys and girls have been found to differ is the things they do. Some research shows that girls and women are more likely to respond to a compliment about their accomplishments with something like: "Oh, it was just luck," or, "I had a lot of help," or, "You'd have done much better. " Boys and men are more likely to respond, "Thank you," or, "I worked hard on that," or, "I was pleased with those results." Many of women's responses attributing success to something outside or shift the focus immediately to someone else.

In fact, as late as 1993, some research showed that boys tended to talk more about their accomplishments than girls. On a piece of paper, write the answers to these questions, discuss them with a partner, or take time to think about them.

1) Name some adjectives that describe what boys are like. How many of these are really true? How many are not?
2) Name some words that describe girls. How many are true? How many are not? "

How do the labels and messages that boys and girls receive affect self-esteem? Achievement? Feelings of control? Expectations of success? How do these messages affect choice of careers? " (Possible answers: Conflict between wishes for growth and the messages, self-doubt, fear of success, etc.

How do these messages affect women in the world of work? For example, do bosses expect women to gossip, i.e., not be trustworthy in business, then give a job to a man?"
A 36% growth is expected in jobs in math- and science-related fields in the next ten years (AAUW study). Yet, young women are still not signing up for math or science courses? Why do you think this is true?
During the course of this unit, we will explore the ways messages like these affect the lives of women.

CLOSURE:
A lot of thoughts about ourselves are not genetic. They are given to us by influences outside of us. Today we learned that

boys and girls often get different messages about self-esteem, achievement, and success.

One thing to realize from this is that some of these differences have also made their way into the world of work. Some of the messages may be true, some not. The more we become aware of those messages, the more we are able to pick and choose which ones we want to listen to and which ones we do not. Messages come to girls about education and careers. This unit is about messages.

PRACTICE:

Try receiving a compliment about your accomplishments in a different way. Respond differently than you usually do. Ask your mother, grandmother, or another woman how they learned to accept compliments.

How do you make a decision about which courses to take? About the ones in which you will try hardest?

SESSION TWO: Gender Roles for Better or for Worse

ACTIVITY ONE

OBJECTIVES:

- To introduce the unit
- Identify sex role stereotypes
- Identify messages that affect career success and choices

MATERIALS:

Handouts-Characteristic Checklist
Handout: Knowledge of the World of Work/Heroes

PROCEDURE:

In the last session we explored some of the messages that can affect how boys and girls feel about themselves and success. Some of the messages are true, and some are not. We found that those messages also have made their way into the world of work.

Today we will explore expectations for women in the past and in the present. We will look at a list of characteristics and

1. Choose three that describe us.
2. Choose three that we would like to develop or strengthen.

Look at the list. Write down your choices.

CLOSURE:

We have seen a list of characteristics and realize that there are many traits that are necessary and useful both in daily life and in the world of work. If we don't feel we have a necessary trait, then we can begin to develop needed strengths.

ACTIVITY TWO

OBJECTIVES:

- •Identify sex role stereotypes
- •Recognize that women's roles are changing
- •Identify effects of sex role stereotyping, especially in careers

MATERIALS:

Handouts-
Bem Sex Role Stereotype Checklist
The Traditional Woman

PROCEDURE:

Now think of ways boys and girls differ in school, sports, clubs, friendships, and family life. We know that we can't speak for all boys. That would be a stereotype in itself.
Look at the Characteristic Checklist. In 1972, Sandra Bem did research to determine which characteristics boys and girls though of as masculine and which as feminine. Let's play with this list and see what we come up with.

1) Put 'M' beside a characteristic that might be thought of as 'masculine'.
2) Put 'F' beside the characteristics that might be thought of as 'feminine'.
3) Put 'N' beside the characteristics that might be thought of as 'neither'.

These are not necessarily what you believe are masculine, etc., but the way you feel most people would classify them."

Allow 5-10 minutes.

Now, look at the list that Sandra Bem came up with, the Bem Sex Role Stereotype Checklist, and the more recent, 'Traditional Woman List." Compare your list with the other two.
How did the changes come about? How widespread? Which groups ascribe to them more than others?
Are the traits learned or inborn? For example, if you wanted to become a leader, or become more reliable, what might you do?
How have the stereotypes affected women's career choices and preparation?
Write down some of your answers and thoughts you have about these questions.

CLOSURE:

Later research found that individuals high in both masculine and feminine traits had higher self-esteem and achievement. It is true that options are changing for females in career preparation and in choosing careers once open only to men.

However, here's what is true of schools (1994):

1. Teachers tend to call on boys more than girls.
2. Teachers tend to help boys reason through operating everything from staplers to computers. They tend to do-it-for girls.
3. Teachers tend to give .9 seconds for a response before they go on to the next student or answer the question themselves. This has been found to limit students, especially girls in math and science classes, where they are already often a minority and feeling unsure.
4. In classes in which the atmosphere is competitive rather than cooperative, or ones in which mistakes are not seen as "okay", asking questions can be very risky. Girls often feel stress and stop asking questions.
5. Sexual harassment and discrimination by male peers often sets a tone that says boys are dominant and more important, and girls suffer in self-esteem and achievement.
6. Boys' responses in class are more often questioned and probed to get them to think more. Girls are more often told, "Good," "Great," or "Uh-huh," or their responses are not commented upon at all.

PRACTICE:

Make observations of people whom you know this week. Keep a journal to record your thoughts and observations, such as:

1. If you were married, would you support your husband if he wanted to be the homemaker?
2. If you decided to remain single, what would your friends and family think of your choosing a non-traditional (male-dominated) career?

3. What are the difficulties in both parents' working, either with or without children?
4. What are the difficulties of being single (unmarried/widowed/divorced) with a family and working ?

SESSION THREE: Women in the World of Work-Who Are the Heroes?

ACTIVITY ONE

OBJECTIVES:

- •Identify females who have overcome obstacles
- •Identify characteristics necessary to overcome obstacles

MATERIALS:

Pencil and paper

PROCEDURE:

In the last two sessions we learned that girls receive messages that can work against them to achieve success in school and careers. The messages, the options open to women, and the amount of success is changing today. In this session we will learn about models for our own success.
Think of someone whom you admire. It may be someone you know or have read about, seen on television, or heard about.

Write down:

1. Three names of living people who will make decisions that will have a great impact on the world.
2. The name of someone whom you admire.
3. The name of someone who has had a great influence on your life.

PROCESSING:
Think about your three people. Let's take a count. How many were male? How many were female?
What were some characteristics of these women who were really today's pioneers?" (Possible answers might be: Courage, planning, working for a goal, believing in themselves, not letting others discourage them, educated, etc.)
Who were the people whom you admire and why ? "
Allow the girls to share.

Who were the people who have had a great impact on your life?
Write down or discuss your ideas.

CLOSURE:
The women we have named here are all women who have succeeded in spite of the messages that were sent to them as children and as young women. The characteristics that they showed allowed them to take control of their lives and achieve at unexpected levels. They made it happen! Young women today do not have to be traditional. The way is open to you today to achieve your dreams.

ACTIVITY TWO

OBJECTIVES;
- Identify females who have overcome obstacles

MATERIALS:
Card Game

PROCEDURE:

Now we will play a game that will help us to get to know more about other great women.

Divide the girls into three groups of four girls each.

There are many women throughout history, as well as today, who have been successful and have made great achievements. We may not be familiar with their names, partly because it is only recently that the contributions of women have been acknowledged. Perhaps in a few years, some of you in here right now will be included in a game of heroes.
For this activity, read through the sheets: Knowledge of the World of Work/Heroes.

PROCESSING:

What observations did you have about the women whose names were included?

What comments do you have about the facts in the World of Work Information?

PRACTICE:

1. Make observations of women whom you know this week.
 Keep a journal to record your thoughts and observations, such as thoughts about decision-making, budgeting, sharing tasks around the home, efforts to get ahead in their jobs.
2. Think about this:
 If you were married, would you support your husband if he wanted to be the homemaker?
 If you decided to remain single, what would your friends and family think of your choosing a non-traditional (i.e., presently male-dominated) career?
 What are the difficulties in both parent's working, either with or without children?
 What are the difficulties of being single with a family and working?

SESSION FOUR: THE CHALLENGE OF CONTROL

OBJECTIVES:

- Identify examples of positive/control vs. negative/blaming ideas.
- Describe the relationship between positive and negative ideas and success in careers

MATERIALS:

Challenge Me
Negative Poster; Positive Poster

PROCEDURES:

In our sessions we have identified messages that women receive from society, peers, and families about how they are supposed to feel, think and act. We also discovered that if we become aware of the influences, then we can decide how to respond. We have seen that many women have succeeded. Sometimes the messages are positive and sometimes they are negative.

In this session we will explore how negative and positive thinking affects success. What we think and say can influence how we act. If we say positive things to ourselves, for example, it tends to help us succeed. When we say negative things, we often set ourselves up for failure and get more negative results.

Let's look at the meaning of the words 'positive' and 'negative.' Look at the "posters" to emphasize the concepts.

By 'negative', we mean statements or thoughts that blame, that express self-doubt, or say that the results are due to luck. By positive, we mean statements or thoughts that take responsibility, express expectations of success , and encourage the taking of control.

Let's think of some examples.

Think about times when you have had negative thoughts and when you have had positive thoughts. How were these related to actions? Success?

ACTIVITY ONE:

Look at the list of statements: *Challenge Me.*
The object is to learn to identify statements that are positive and that put you in control of your life, as well as identifying negatives in which you give your power away.
Read aloud the statements. Decide whether the statements are negative or positive.

ACTIVITY TWO:
Try to come up with an *opposite* statement related to the situation implied on the list.

EXAMPLES:

Negative: I probably would get better grades if I hung around with other people.
Restated Positive: I probably would get better grades if I managed my time better.

Negative: I don't care that I didn't get that job, it's only for "Dumb and Dumbers", anyway.
Restated Positive: If I had submitted a better resume, I would have gotten that job.

PROCESSING:

Think about the impact of positive and negative statements. Are statements that are negative and lack of control in a situation related to chances of success? Can negative statements be used as a motivator? Can positive statements make a person seem like bragging or having false confidence.
What's the difference? How are negative and positive statements, such as those on the cards, related to success in the world of work? Getting a job? Going to college? Being successful in school?

CLOSURE:

Negative and positive statements can influence success in many places. Taking responsibility, being self-confident, and taking more control in one's situation and life often leads to more success. Blaming others, relying on luck, and ignoring choices contribute to failures in school, home, and the world of work.

PRACTICE:

1. Notice the next time you are around someone who is having difficulty with a task or a goal. Do they say, "I can't?" What do they say to justify their "I can'ts?"
2. Ask someone whom you admire about a difficult time or a time when they were tempted to give up a dream or goal that they had. Ask what kinds of things they told themselves.
3 Read a biography of one of the women heroes mentioned last week. Did they have difficulties? Did anyone ever tell them that they would not succeed? What happened? What did they tell themselves?

POSITIVE

Statements or thoughts that:

1. TAKE RESPONSIBILITY

2. EXPRESS EXPECTATIONS OF SUCCESS

3. ENCOURAGE TAKING CONTROL

NEGATIVE

Statements or thoughts that:

1. BLAME
2. EXPRESS SELF-DOUBT
3. SAY THAT RESULTS ARE DUE TO LUCK

CHALLENGE ME-A List

STATEMENTS:

Even numbers are positive. (Taking control.)
Odd numbers are negative. (Giving away power.)

1. I would have become supervisor, but my boss has a hang-up about women.
2. I didn't get the job because I didn't let my boss really know that I could do the job.
3. He keeps sexually harassing me because he is a sexist pig.
4. He harasses me. I've been shy about confronting him.
5. That company doesn't understand women.
6. If I worked for that company I know I would need to be assertive.
7. You can't get into engineering, that's a man's field.
8. If I went into engineering, I would have to have good skills in math.
9. No matter what a woman does, men are going to get the top jobs.
10. Men might have an edge, but there are lots of things women can do to prepare and be qualified.
11. I feel I won't have much to say about what I get paid.
12. Working hard and doing the best job can determine what I get paid.
13. It doesn't make any difference about effort, you get paid what your boss wants to pay you.
14. If I learn to negotiate well, I can get what I deserve in terms of salary and benefits.
15. Sometimes you just have to put up with a bunch of people you don't like.
16. By doing a good job, people will respect my work. We do not have to become good friends.
17. It's useless to try to get my way on a job.
18. If I am assertive and work hard, I will succeed at my job.
19. It doesn't make a difference. Most kids are born to have certain kinds of jobs.
20. If I plan well, get the proper training, and work hard, I can succeed in my chosen area of work.

21. I probably would get better grades if I hung around with other people.
22. I probably would get better grades if I managed my time better.
23. I don't care that I didn't get that job, it's only for "Dumb and Dumbers", anyway.
24. If I had submitted a better resume, I would have gotten that job.

SESSION FIVE: I Am Capable

Objectives:

- •Identify the difference between interest and capability.
- •Identify interests and capabilities that relate to career choices.
- •Identify differences between being interested, being skilled, achieving mastery, being gifted.

Materials:

List of 34 Hottest Careers
Placards for Interest, skilled, mastery, gifted

Procedure:

In the last session we learned how our own messages to ourselves can influence success. Negative and positive statements can influence success, especially if they influence the actions we take.
In addition, knowledge of the way our interests, capabilities, and talents relate to choices about our actions can help us be successful.

Today we will look at our capabilities and interests. Most people underestimate their capabilities.
What influences how you feel about your capabilities?
Possible answers: Not ready, not properly prepared, not interested, lack of coaching, previous lack of success, etc.

Capable means "skilled". Remember back in your childhood, when you were learning to ride a bike. How many of you wanted to learn to ride a bike ? (That can be called *interest* level). How many rode a bike perfectly the first time?(That can be called*Gifted.*) If you didn't the first time, how did you finally accomplish that task? What did you have to do? (Develop the skills, develop *mastery* .)

Most of us had to attempt riding the bike over and over again to become skillful. How do people ride with no hands? Do a

'wheelie' ? Win a motocross race? Enter the Tour de France? Perform on a tightwire in a circus? People learn, develop skills, and acheive a level of *mastery."*

Think about the difference in capability between having *Interest , Skill , Mastery , Giftedness* related to a task or career

Do you agree or disagree, or are undecided about the following questions? Think about or write down the reasoning behind your opinion.

Is it possible to not be interested in a task or job and feel you are not capable?

Is it possible to be interested, have the ability, and not succeed? (e.g., not have mastery because you have not taken appropriate action).

Is it possible to be really talented or gifted at something and still not succeed? (e.g., lack of discipline, lack of effort, , not taking appropriate action).

Is it possible to have talent (giftedness) and not mastery? Mastery and not talent?

Interest > skill > mastery
leads to leads to

What does the skill or learning for a career depend on? Not ability alone. It can depend on interest, inborn giftedness, and the actions you take such as training, discipline, etc.
Does interest affect performance (skill)? Does interest affect whether a person is capable? Does it affect ability? Mastery? Can you be interested in just about anything? Could you probably master about anything?
Important: There are levels of involvement with a career: interested, skilled, mastery, gifted.

Let's think about how tthese levels apply to jobs. Here is a list of the hottest jobs in the next ten years.

Look at the "List of 34 Hottest Jobs".

Choose 3 jobs you might be interested in for the future. Mark the ones chosen with an 'X'. Indicate the level you are now in terms of Masterful, Skilled, Interested, Gifted, of the jobs you are interested in.

PROCESSING:

Think about the following questions:

Which occupations do you think were most chosen: Why?
What was it like to place yourself in occupations and levels? What did you consider as you placed yourself?
What was it like to be placed?
What difficulties are posed when you have many interests/capabilities? Possible answers are: difficulty deciding, having to find inter-disciplinary career paths (e.g., bio-medical, medical engineering, counseling and computers). "

CLOSURE:

Many of us underestimate our capabilities. However, when we believe in ourselves, we find that we can do just about anything that we are determined to do. We just need to take action.
Interest and skills voiced in elementary or middle school or even earlier performance or success do not have to limit us. We have more options.
The more we learn about ourselves and the world of work. the better we are able to make choices that lead to success.

PRACTICE:

Talent Search-

See how many of the following you can spot this week:

1. Woman working at a construction site
2. Man involved in child care
3. Woman doing a "man's job" (mowing the lawn, taking out the garbage, etc.)
4. Man doing a "woman's job" (cooking, laundry, grocery shopping, etc.)
5. A female M.D.
6. A male elementary school teacher
7. A female computer expert or engineer
8. A female attorney or principal
9. Any others....

SESSION SIX: Into Action-Being Myself In Every Situation

OBJECTIVES:

- •Identify assertive behaviors
- •Recognize that behavior does not have to depend on feelings
- •Identify options for acting differently.
- •Develop a non-judgmental self-appraisal for situations which require social, leadership, and authority-related skills.
- •Identify differences in competition vs. consensus situations

MATERIALS: List of Situations

PROCEDURE:

In the last session we learned that our interests can be translated into capabilities if we take the action necessary to develop skills and mastery.

In the world of work, women are often expected to relate well to their peers as well as to authority figures and to exhibit leadership skills.

In this session we will think about how judgments of ourselves often create feelings that affect our development.

For the next activity, we will explore the ways we relate in social situations, to authority figures, and in leadership situations.

Look at the list.

You are trying to come up with a ranking of the stress level.

WHAT IS YOUR STRESS LEVEL???

LIST OF SITUATIONS

On a scale of 1-10 (1 is lowest; 10 is highest.), rank order in terms of stress/fear your feelings about the following situations.

GROUP I

A. Approaching authority figures:

1. A judge
2. A policeman
 e.g., It can vary:
 (You have a flat tire)
 (You have just been caught throwing a bottle at a plate glass window.)
 (The policeman stopped because you and some friends were painting "The Wall".
3. A teacher about a mistake about a nine-weeks grade
4. A boy who is sexually harassing you

GROUP II

B. Speaking to or mixing with others:

6. three students whom you met at a party last weekend
7. two students who look lost on their first day of school
8. your best friends at lunch time
9. a homeless person

GROUP III

C. Leading/taking charge:

13. with your little brother/sister, who wants to borrow your new shirt
14. with a boy who has a gun pointed at you

15. with 20 people who are threatening to break into and loot a building
16. after an automobile accident. You were one of the drivers in a four-car crash. Everyone is just standing around, in a daze, or injured and still in the car. There were no witnesses.

GROUP IV

D. Leading/taking charge:

17. working on a group project with Hillary Clinton, Hugh Grant, and Val Kilmer
18. working on a group project with the school principal, vice principal, president of student government
19. working on a group project with three very eager-to-please kindergarten students. They worship you.
20. in a group of three, you are asked to be a recorder.

PROCESSING:
What questions came to mind as you tried to rank the situations?
What makes us act differently in uncomfortable situations ? (feelings of low self-esteem, unsure, etc., basically FEAR,
What is fear? (Expecting bad things to happen, especially of others' reactions to us, sometimes justified-the gun situation-sometimes not).)
How do we usually act when we are fearful (stressed, unclear-thinking) ? Do people read our minds? How would they know we are afraid? (They see only our behavior.)
How does a person learn to face an uncomfortable situation? (Practicing new behaviors, acting as if they weren't afraid, etc.)
Can we act as if we weren't afraid? Is it insincere?

CLOSURE:

We saw in this session that we can have control of our actions, even if we don't always have control of our feelings. The same clear thinking we experience in comfortable situations now is possible in less comfortable situations with practice. Even if we don't feel comfortable, we can act in ways we have learned which get us through the situations.
We can feel comfortable in situations which require social skills, leadership skills, and skills in dealing with authority. All

of the skills and practices we are learning today can help in similar situations in the world of work.

PRACTICE:

1. Make a point of talking to someone today that you have never talked to before, just for practice.
2. Make a point of talking to a teacher, principal, boss, or other authority figure today, just for practice.
3. Look at people or characters whom you think of as brave. How did they get that way?

SESSION SEVEN: The Big Picture

OBJECTIVES:

- •Identify job types that are related to skills and interests.
- •Identify jobs that fall into those types.
- •Identify next step for success in career preparation and choice.

MATERIALS NEEDED:

Handout-The People Environments
Handout-Party Job Lists
Handout-The 50 Top Occupations

PROCEDURE:

In the last session we learned that we can develop skills for meeting and working with groups of people as leaders, as peers, or as followers. All of the skills and behaviors we learn can be choices which will help us succeed in the world of work.
Today we will learn more about our interests and how those interests affect the people we prefer to be around and subsequently the work environment we might prefer.

THE PARTY

Now we will do an activity which requires us to assess our interests and abilities. In order to do this exercise, we picture ourselves at a party with several groups of people. As at most social gatherings, the people group themselves according to what they have in common. Look at the p[apers I will give you and follow the directions. The idea is to choose a group or groups based on your abilities and interests. The idea is to disregard shyness, money, moods, or what others might think.

Look at the handout, three pages.
Choose a first, second, and third group of people and a first, second, and third letter from the six (RIASEC). Most people are a combination of types.

Look over the handout, then look at the next page at the list of jobs under each letter.
Look at the next page at the jobs listed by type. Some combinations are shown at the end of each list, for example, athletic coach is a combination of R(realistic) and S(social). Look at the types of jobs under the letters you came up with from the "Party".
Look also at the 1995 statistics for the 50 top occupations with figures for starting salary, median salary, typical top salary (after 12-14 years), ratio of men to women in the job, and information about some emerging careers in specific metropolitan areas. Look for the statistics for five jobs that interest you. Do they fit in your 'type'?

PROCESSING:

How does the identification of a type help to find possible job choices? (Possible answers are: by putting jobs in categories, by giving a hint at what is required for the job, by identifying fields of interest that lead to discovery of other job possiblities, etc.)
What did you learn about yourself? What did you learn about the world of work?
What other things must be considered when choosing a career? (Possible answers: our own values, availability of the job, prestige, social influences, salaries, benefits, etc.)
Name three skills you have now. Name three that you would like to develop.

CLOSURE:

There are many things to consider in making career choices, including values, interests, abilities, status, social influences, salaries, and availability of jobs.
As we become more aware of ourselves, we will be closer to success in choosing a career that is fulfilling.
We can make choices now that prepare us for a range of careers in which we can be successful.

PRACTICE:

Think of women or men who are happy in their careers, or interview them. How did they choose their career? Did they get help in making a decision? Did they end up with the career they planned in the ninth grade? Why or why not? Some research says that many women "drift" into a career rather than make a conscious choice. Will you?

SESSION EIGHT: Career Puzzle

ACTIVITY ONE

OBJECTIVES:

- Identify facts about the world of work.
- Identify facts about heroes.

MATERIALS:

World of Work/Heroes Sheets

PROCEDURE:

In the last session we learned that young women can learn skills for situations that are social, leadership, and authority-related. Comfort in new situations requires practice.
In this session we will practice with information about the world of work and about women heroes.

Read again the sheets "World of Work/Heroes".

ACTIVITY TWO:

OBJECTIVES:

- Practice with facts from the world of work
- Practice with facts about women heroes

MATERIALS:

Career Development Crossword Puzzle

PROCEDURE:

Complete the two crosswords for fun and for practice.
Try not to peek at the answer sheet until you have tried them all.

PROCESSING:

Think: If you could give one statement about women in the world of work, what would it be?

CLOSURE:

You have had a review of knowledge about the world of work and about women heroes who are role models in achieving success. You are more aware at this time of messages, of obstacles, and of characteristics needed to achieve your dreams.

SESSION NINE: Affirming Our Strengths

OBJECTIVES:

- Identify strengths and areas of possible improvement related to jobs.
- Identify sources of support.
- Identify fantasy jobs.

MATERIALS:

Pencil and paper

PROCEDURE:

In this session we will learn more about our strengths, possible areas of improvement, and identify sources of support and possible jobs.

Put four things on the paper:

1. The symbol of a job that you would choose if you didn't have to think about training or money.
2. The name of a person who thinks you could make this happen.
3. One skill you would have to improve upon to get that job.
4. One thing you hope to get out of a job other than money.

What did you learn? How would you feel about sharing this information? What steps would you take to improve the skill? What are some of the values revealed in naming something other than money a woman can get out of a job?

Name three strengths that you possess that you feel will help get the job.

PROCESSING:

What did you learn about yourself? About the world of work?"

CLOSURE:

In these sessions we learned about ourselves and the world of work. We learned about messages and how our feelings and actions can help us when we decide either to accept the messages or reject them. We learned about sour strengths and areas we can improve and develop. We learned that we can and will be successful, because we know how to take charge and prepare for success.

APPENDIX 1 -Possible Reasons Girls Feel Conflicts.

Internal conflicts:
Achievement vs. Self-Realization/Actualization
Self-Control vs. Self-Expression
Independence vs. Interdependence
Full-Employment vs. Full Lives.

The values on the left are considered traditional values and those on the right emerging values. Gifted students tend to be leaders in striving for and achieving emerging values.

In addition to these expectations, gifted women often find themselves in a position in which they are expected to adopt dual roles which are conflicting. They are expected to behave one way because they are gifted and another way because they are women. Examples of conflicts which they must confront in their career development are:

1. A gifted student is expected to develop his/her own talent and be selfish in energy use yet a woman is expected to be selfless, nurturing, and giving.
2. A gifted student is expected to be active, exploring, and assertive in his/her demands, yet a woman is expected to be passive and dependent.
3. A gifted student is expected to pursue a challenging career yet a woman is expected to run a household.
4. A gifted student is expected to develop his/her talents yet a woman is expected to put her career second to "her man's " career.
5. A gifted student is expected to succeed in the traditionally male-dominated careers such as science, medicine, math and business, yet a woman is expected to be "feminine".

It is not uncommon for the gifted to regard their work as a major means of self-expression. Thus for the gifted, occupational choice becomes a choice of life-style (rather than simply a job) with primary considerations being philosophical, social, and personal values and goals rather than economic and material ones. (Hoyt and Hebeler, 1974)

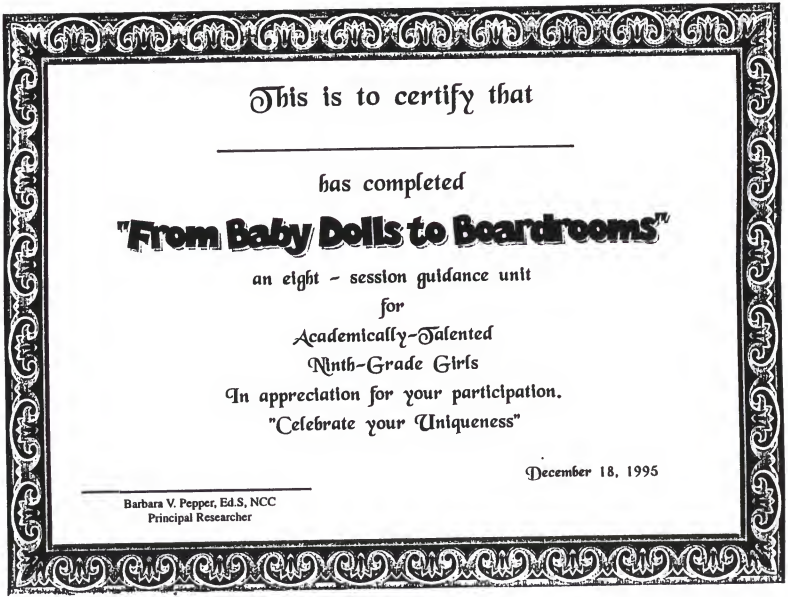
External: Career Investment:

Most gifted students develop their talents through extended training and higher education, essentially society's channels to positions in the most sophisticated careers. This fact gives rise to several problems:

1. Commitments must be made relatively early and then pursued systematically.
2. A heavy investment in terms of time and financial resourcesa is required.
3. It is difficult to change career directions once there has been considerable expenditure of time and resources. (Hoyt & Hebeler, 1974).

Certain other forces seem to be at work with women regarding career development and investment:

1. Attention to the development of one's special talents seem to be in conflict with the cultural expectations for the development of women.
2. Females who conform to the expected sex-role of passivity and dependence may be less likely than her male counterparts to be identified as gifted and may capitalize less on opportunity.
3. Females, including those who are gifted, have less credibility in academic and professional matters, and are often denied credit for individual contributions to group efforts. (House, 1974).
4. Historically, there has been less interest and investment in cultivating the academic and professional interests of women.
5. Overt discrimination in the form of reduced opportunities to receive fellowships and awards, participate in athletics and other organized activities, be admitted to graduate and professional schools all serve to limit the development of the potential of gifted women. (Rodenstein, et al, 1977)


This is to certify that
has completed
"From Baby Dolls to Boardrooms"
an eight - session guidance unit
for
Academically-Talented
Ninth-Grade Girls
In appreciation for your participation.
"Celebrate your Uniqueness"
December 18, 1995
Barbara V. Pepper, Ed.S, NCC
Principal Researcher

APPENDIX D
POSTASSESSMENT SURVEY

QUESTIONNAIRE

PLEASE indicate the degree to which you agree or disagree with the following statements, by circling a number. 1 is the lowest level (completely disagree), 10 is the highest level of agreement (totally agree).

1. I enjoyed the unit.

1 2 3 4 5 6 7 8 9 10

2. I would recommend the unit to another high-achieving girl.

1 2 3 4 5 6 7 8 9 10

3. I was influenced by what I learned in the unit.

1 2 3 4 5 6 7 8 9 10

4. I have shared some of what I learned with someone else.

1 2 3 4 5 6 7 8 9 10

5. I will use some of the information I learned in making career choices.

1 2 3 4 5 6 7 8 9 10

6. I felt the group supported me in my thinking about career choices.

1 2 3 4 5 6 7 8 9 10

7. As a result of the group, I feel more confident about my career choices.

1 2 3 4 5 6 7 8 9 10

8. As a result of the group, I have some helpful ideas about my future.

1 2 3 4 5 6 7 8 9 10

Please add your comments for the next two questions. Use the back of the paper if you do not have enough room.

9. What I liked best about the group was:

10. What I liked least about the group was:

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BIOGRAPHICAL SKETCH

Barbara Vanderhoek Pepper was born in Ocala, Florida, in 1945, the daughter of John Snow Vanderhoek and Mary Lindner Jones Vanderhoek. Barbara graduated from Terry Parker High School, Jacksonville, Florida, in 1963, attending Florida Presbyterian College on a scholarship, majoring in French. Her bachelor's degree in French, awarded in 1968, included work at the University of Strasbourg, France, and a senior year at Jacksonville University after her marriage. She worked as a reading and English teacher while earning an M.Ed. in reading at the University of Florida in 1971.

After 14 years of teaching reading, French, and English in sixth grade through college in public and private schools, Barbara entered the Ed.S./Ph.D. program in counselor education in the marriage and family track at the University of Florida, later changing tracks to school guidance and counseling. While in graduate school, she worked in graduate assistantships for the Department of Special Education, the Learning Resources Center Reading Lab, and the Teacher Education Center, and filled various offices in Chi Sigma Iota International Counseling and Academic Society. In 1994

she was co-recipient of an international award for service to Beta Chapter, Chi Sigma Iota.

After internships and practica at the University Counseling Center, the Corner Drug Store, and CREST Services as well as guidance and peer counseling at Gainesville High School, Barbara received her Ed.S. degree in guidance and counseling in 1990 and took a position at Gainesville High School for five years as a guidance counselor.

Barbara has served on the Middle School Board and the Board of Adult Ministry for the United Church of Gainesville. She has played U.S.T.A. tennis, level 3.5, on a team that has competed in regional competition. She is a member of AAUW and is serving a two-year term as secretary for the local chapter. She is the mother of Clifford Neil Pepper, age 21, a senior in electrical engineering at the University of Florida.

Barbara plans to complete requirements for licensure in mental health counseling and enter private practice as a therapist working with teens and families.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Robert D. Myrick, Chair
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Larry C. Loesch
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

M. David Miller
Professor of Foundations of Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Mary A. Fukuyama
Clinical Professor of Psychology

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 1996

Dean, College of Education

Dean, Graduate School